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Parties, Committees, and Rules
in the U.S. House of Representatives

by

Hong Min Park

A dissertation presented to the
Graduate School of Arts and Sciences
of Washington University in
partial fulfillment of the
requirements for the degree
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ABSTRACT OF THE DISSERTATION

Parties, Committees, and Rules in the U.S. House of Representatives

by

Hong Min Park

Doctor of Philosophy in Political Science

Washington University in St. Louis, 2010

Steven S. Smith, Chair

This dissertation project aims to build upon the literature of positive theories of legislative politics, and provide three more nuanced stories about various stages in the U.S. House of Representatives: rules making, committee composition, and floor voting.

The chapter, *Conditional Nature of Rules Changes*, examines why the U.S. House of Representatives has changed its standing rules regarding the principle of majority rule and minority rights. I begin by taking a critical look at previous studies on this subject, after which I propose an alternative theory on the conditional nature of rules changes. The empirical findings reveal that different combinations of factors are required for the two distinct types of rules changes. In particular, the *size* and *homogeneity* of the majority party are the main factors for promoting majority rule while the *size* of the majority party and the *dimensionality* of policy space are the main factors for creating minority rights.

The chapter, *Minority Party Members on Committees*, questions why a generic legislature allows minority party members on committees. If the majority party considers the minority a burden, then it could choose to exclude minority party members entirely from the committee system. This has, however, rarely happened in history. This chapter provides one possible explanation to this puzzle via a simple signaling game. In equilibrium, I show that the majority party has an incentive to include the minority party delegation

on the committee. By allowing the minority to make a public speech on the uncertainty, the majority leadership can constrain the majority committee delegation in a way to serve the party in general: the majority committee delegation, in equilibrium, moderates the bill proposal in order to respond to the minority's public speech.

The chapter, *Special Rules and Dimensionality*, is one of the first attempts to investigate the determinants for dimensionality of individual bills. I first develop a theory on partisan manipulation of dimensionality by focusing especially on the role of restrictive special rules in the House of Representatives: party leaders try to reduce the dimensionality of individual bills in order to have clear party image and to avoid ugly defeats. I collect every piece of "major legislation" identified by Clinton and Lapinski (2006), and record the contents of their special rules. Ultimately, the data demonstrate that restrictive rules contribute to lower dimensionality.

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Chapter 1

Introduction

Approaches to studying legislative politics prior to the 1970s largely drew from sociology, which paid special attention to the norms and functions of legislative organizations as well as legislators themselves. Since human beings are supposed to interact with one another through a group, the group develops prescriptive and descriptive norms to function effectively. A shared norm defines a certain group, and a set of norms becomes an institution. For example, Matthews (1960) analyzes norms (also known as *folkways*) that strongly influence the individual behavior of Senators. They include apprenticeship, work-orientation, specialization, courtesy, reciprocity, and institutional patriotism. Fenno (1962) describes the House Appropriations Committee as a *social system* that shares similar roles and jurisdictions. The committee is integrated by the norms of subcommittee unity and minimal partisanship, and has been maintained through internal socialization process and sanctioning mechanisms.

An alternative approach is a rational choice perspective that originally borrowed from economics. Early work such as “paradox of voting” and “impossibility theorem” (Arrow 1951) and “median voter theorem” (Downs 1957; Black 1958) taught political scientists

that the rationality assumption could be useful in analyzing politics. Riker (1962), for instance, utilized the game theory to demonstrate the principle of “minimal-size coalitions.” Legislative studies, in particular, developed a trend that can be summarized as a “positive theory.”¹ Goal-seeking individual legislators are influential in deciding internal structures and policy outcomes. They are constrained by rules and institutions, and are involved in strategic interactions with one another. Because utilities are attached to goals, legislators are subject to a rational calculation of the costs and benefits associated with their purposive actions. Fenno (1973), among others, establishes these principles in an explicit way and analyzes six standing committees in the House. Mayhew (1974) proposes the idea of single-minded reelection-seeking legislators and explains various activities by legislators as well as congressional organization.

1.1 Positive Theories of Legislative Politics

We live in a complex world, where only a few issues are salient and many others are latent. From time to time, a new issue becomes salient and some fade away. There is no stable and constant arrangement of issues and interests in nature. Congress, as a collective body of elected officials, reflects this complex nature. However, it also needs to function effectively, so the essence of congressional politics has been to *structure* the legislative motivations and interests in a way that serve for a certain group in Congress. Political parties have performed this role throughout most of American history, but standing committees, regional groups, and cross-party coalitions have been influential as well.

¹According to Amadae and Bueno de Mesquita (1999), the term, positive theory, was first invented by Riker. It means that political scientists “make positive statements about political phenomena, or descriptive generalizations that can be subjected to empirical verification” (270).

In the chapters that follow, I build on a literature that has characterized the motivations of legislators and organization of Congress in several ways. While all of them have a common ground that is considered as a positive theory or a rational choice perspective, each has its uniqueness. Among others, I want to focus on three general perspectives and their variants: distributive, informational, and partisan perspectives. As it will be clear later in this introduction chapter, the primary goal of the dissertation is to take multiple theoretical approaches to better understand legislative politics. If we avoid strictly following one and only one perspective and try to accommodate several valuable approaches at the same time, we can examine the complex feature of Congress in a more systematic way.

Chaos Theorem and Distributive Perspective

The distributive perspective was an attempt to answer a puzzle raised by social choice theories in the 1970s. Social choice theories focus on the equilibrium properties of majority rule. A puzzling finding is that an equilibrium does not exist under general circumstances, which is famously known as the “chaos theorem” (McKelvey 1976; Schofield 1978). Assume an m -dimensional policy space $X \subseteq R^m$, and consider a policy choice $x \in X$ by n -person legislature. The legislature operates under a system of pure majority rule where any member can propose a policy x to change the status quo, x^o . For any point, $x \in X$, we can think of a win set at x , $W(x)$, which commands the support of a majority against x . As such, the chaos theorem shows that, for all $x \in X$, $W(x) = \emptyset$. In other words, one can construct a sequence of alternatives between *any* two points in a multidimensional space that will lead from the starting to the ending point under the majority rule. This implies that majority rule cycles exist (i.e., instability).

Contrary to the theoretical prediction, policy outcomes and institutional choices are generally quite stable in reality. Shepsle (1979) took a significant step to solve this paradox. His contribution was the concept of a jurisdictional system that partitions a multidimen-

sional choice space into subsets of single issues that are voted on one at a time. Under this jurisdictional system, such as the committee system in Congress, and under the germane amendment requirement, Shepsle shows that there is an equilibrium, a “structure-induced equilibrium.”

The distributive perspective, then, provides a rationale for the existence of the committee system in Congress: It is designed to distribute particularistic benefits to individual member’s constituents (Weingast and Marshall 1988). The starting assumption is that the primary goal of legislators is reelection (Mayhew 1974). Legislators design the committee system as multiple committees with mutually exclusive and exhaustive jurisdictions of their own. This system generally allows members of Congress to gain membership on the committees most relevant to their own constituencies and to pursue the strongest constituency interests there. Because constituencies are relatively diverse and heterogeneous, this system could benefit every member without hurting others. Moreover, the committee system as a whole would work as a giant logrolling device via “gains from trade.”

Informational Perspective and Pivotal Politics Thesis

The informational perspective clashes with the distributive perspective in respect to the role of the committee system: it is designed to meet the needs of the parent chamber by providing information about policy (Gilligan and Krehbiel 1987, 1989; Krehbiel 1991). The underlying assumption is that a legislator’s main goal is policy (mostly unidimensional).² The two postulates in this theory are (1) that the majority of the chamber chooses the institutions under which they operate (*majoritarian* postulate), and (2) that members, as well as the chamber as a whole, have uncertainty over how their policy choice translates into the actual outcome (*uncertainty* postulate). Because legislators care about policy outcomes,

²Note a difference between the informational and the distributive perspectives with respect to goals. Under the distributive perspective, a legislator’s main goal is reelection.

they have an incentive to devise an institution that helps minimize or eliminate the uncertainty of their policy choice. The committees serve as information-providing experts, and ultimately promote the interests of the parent chamber as a whole.

The pivotal politics thesis by Krehbiel (1998) is an extension of the informational perspective, but with a slightly different focus on floor politics instead of the committee system. Following the median voter theorem, he argues that the policy outcome will be at the position of the chamber median. In addition, a few more pivotal legislators play a role. Due to the presidential veto, the 2/3s member in the president's side becomes a "veto pivot." Similarly, due to the filibuster in the Senate, the 3/5s Senator against the proposed bill becomes a "filibuster pivot." The interactions among these pivotal members on the floor produce the legislative outcome.

Partisan Perspectives

In reaction to the lack of attention given to political parties, scholars have proposed theories about political parties. Political parties form in order to solve several social choice and collective action problems. First, political parties could function as an institutional arrangement that yields a structure-induced equilibrium (Aldrich 1995, 37-45). Or, political parties could serve as an extra-legislative organization that leads to a stable voting equilibrium (Cox and McCubbins 1994). Each is a strategy designed to solve the social choice problem, more specifically the puzzle caused by the chaos theorem.

Second, political parties could be a solution for the collective action problem (Cox and McCubbins 1993). In the electoral process, the reputation of political parties, which is often referred to as a "brand name," plays an important role. It affects both the individual candidate's personal probability of reelection and, more substantially, the party's probability of securing a majority. However, a party's reputation depends significantly on its record of legislative accomplishment and the act of legislating is akin to team production that re-

quires collective action. Members of political parties delegate the agenda setting power to a central leadership and, therefore, political parties perform as a procedural cartel.

Under this perspective, committees are used to promote partisan goals, especially for the majority party. Membership on powerful committees or constituency committees are usually obtained by supporting the party agenda. Disloyal partisans are sometimes deprived of favorable committee memberships. In general, the committee system works as a reward-punishment mechanism for the party (Cox and McCubbins 1993, 1997). Moreover, the majority party functions as a procedural cartel that guarantees favorable outcomes for the party on the floor (Cox and McCubbins 2005). In particular, the majority party has been extremely successful in keeping bills off the floor and the committee agenda that would, if passed, upset majority of its membership (i.e., negative agenda power).

Another theoretical attempt is made by Rohde (1991) and Aldrich (1995): conditional party government thesis. They argue that the importance of political parties in Congress varies over time. As the homogeneity of majority party members increases, and as the inter-party distance between the majority and the minority parties increases, rank-and-file legislators delegate greater authority to their party leadership. As a consequence, political parties and their leaders that possess more authority and power, pursue their party-based policies more aggressively.

Party Effects

While theories of political parties emerge, a criticism of party influence in Congress is also developing at the same time. For example, Krehbiel (1993) argues that preferences, rather than party affiliations, drive the behaviors of congressional members. According to him, parties in Congress are composed of a group of legislators who have similar pre-existing preferences. The seemingly partisan behavior is actually an observational equivalence of ideological behavior. Therefore, the significant party behavior, if any, should be “behavior

that is consistent with known party policy objectives but that is *independent* of personal preferences” (Krehbiel 1993, 240).

In reaction to Krehbiel’s criticism, one group of scholars opposes his definition of significant party behavior. Smith (2007), for instance, argues that political parties and their leaders do not care about the “statistically significant” and “independent” party effects. Rather, they care about winning at the margin of the legislative battles in the name of political parties. In other words, Krehbiel’s concept is not measuring what is important in the “party’s mind.”

Another group of scholars, however, try to uncover an *independent* party influence. First, Snyder and Groseclose (2000) choose lopsided roll-call votes (greater than a 65-35 split) to measure real preferences of congressional members. The reasoning is that the party leaders will not usually try to influence their members’ voting behaviors on the pre-decided lopsided roll-call votes. So, this party-free measure from lopsided roll-call votes serves as the baseline for estimating party effects on the close roll-call votes. Although there are some concerns about the measure for moderate members (McCarty, Poole and Rosenthal 2001), their measure produces a very good match with a survey-based ideology measure (Ansolabehere, Snyder and Stewart 2001).

Second, Sinclair (2002) looks at the votes of both special rules and final-passage motions. If all legislators vote on the rule according to their preferences about the bill, the rule and the bill votes would be identical. In practice, the two votes are far from identical. Rather, majority party members are more likely to vote for the rule even when they are opposed to the bill. This indicates a party influence. Third, there is a quasi-experimental research design: comparing members who are constrained by party pressures and members who are not. For example, Jenkins, Crespin and Carson (2005) divide congressmen into three groups: normal reelection seekers, higher-office seekers, and retiring members. Compared to the other two types, retiring members do not have partisan connections, so

their roll-call records would be different if there was party pressure in Congress. Jenkins and Nokken (2008) also deal with members in lame duck sessions. In a lame duck session, exiting members are free from partisan constraints while returning members are not.

1.2 Need for Multiple Perspectives

Theoretical developments in legislative politics, at first, look as if they are mutually exclusive and competing. Some have emphasized one perspective at the expense of the other perspectives. However, different theories have significantly enhanced our understanding of the U.S. Congress, and have driven the accumulation of vast knowledge about congressional politics.

Above all, it should be clearly pointed out that different positive theories are *not* mutually exclusive in nature. We sometimes observe different assumptions and different predictions. In fact, as rightly noted in Shepsle and Weingast (1994), they are addressing different aspects of legislative organizations and legislative politics. Distributive functions by committees, for instance, do not prevent us from examining partisan aspects of committee politics. The fact that committees provide expertise for the parent chamber does not mean that committees must not produce distributive benefits for constituents. Rather, the insights of multiple theories are likely to be required to account for complex features of congressional institutions and behavior. There are two types of rationale for this.

First, we require multiple perspectives because legislators have multiple goals. Congress is a representational (elected) and a policy-making institution that has an internal organization that creates incentives of its own. The result is that legislators are likely to have multiple goals. Obviously, electoral goals are the primary goals for every individual member in Congress (Mayhew 1974): they should be reelected. At the same time, individual members care about policy. Making good public policy is a key for reelection, and legisla-

tors ultimately want to be elected in order to create good policies. As such, every legislator has multiple goals, and these multiple goals lead to multiple types of strategies and strategic interactions (Smith 2007). More important, this consequently produces legislative organizations that are multi-functional. It is, therefore, essential to have multiple approaches in order to examine multi-functional organizations.

Multiple goals for political parties are also important for legislative theories. A collective interest for a good policy has always been a significant force that brings all members under the party flag. At the same time, it helps to gain and maintain a majority status. By and large, political parties design and utilize legislative organizations in order to serve for these collective but multiple goals. At the same time, political parties mediate multiple goals of individual members. In many cases, parties face conflictive goals of individual members. The collective party goals and the individual member's goals are also incompatible from time to time. Political parties and party leaders resolve these conflicts and require multiple strategies (Sinclair 1995; Smith 2007). Therefore, we require a variety of theoretical approaches to study legislative organizations in a systematic way.

Another way to justify the use of multiple approaches is to focus on the dimensionality of policy space in Congress. Dimensional structures vary from one context to another. They are driven by forces inside and outside of Congress that can affect legislators' perceptions of decision-making space. Different theories, therefore, include distinct characterizations of dimensionality. The distributive perspective, for example, assumes a highly multidimensional policy space whereas the information perspective simply assumes a unidimensional space. The partisan perspective has variation with respect to multiple dimensions: the theoretical foundation does not rule out the possibility of multidimensional policy space while unidimensionality is conveniently assumed for both the negative agenda control thesis (Cox and McCubbins 2005) and the conditional party government thesis (Aldrich, Berger and Rohde 2002).

The relevance of dimensionality in theorizing legislative politics becomes more important when we observe the interaction between dimensionality and political parties. We live in a multidimensional world where all the different issues and interests are represented in the government through political parties. Parties tend to pay more attention to salient issues, which have historically fallen along the liberal-conservative dimension (Aldrich 1995). From time to time, political parties even utilize this dimension for the party's interest by structuring the choice sets. However, simultaneously, this makes the existing parties vulnerable to the threats of cross-party coalitions once the threats are based on multidimensional issues, surely issues not dominated by the liberal-conservative dimension. Therefore, partisan politics, especially in Congress, is a constant effort to balance multiple dimensions in a way that serves the collective interests of the parties. As a consequence, partisan strategies result in different dimensional structures, which require multiple theoretical approaches.

Viewed as the sum of its chapters, this dissertation project aims to build upon the literature of positive theories of legislative politics and provide three more nuanced stories about various stages in the U.S. House of Representatives: rules making, committee composition, and floor voting. Each chapter is a very nice example of combined theories and multiple approaches for each stage of the legislative game.

1.3 Dimensionality and Political Parties

Chapter 2 and Chapter 4 specifically deal with the relationship between dimensionality and political parties. In fact, these two chapters reflect my view on congressional politics and American politics in general. Before we discuss the chapters in detail, it would be best to elaborate how political parties function in a multidimensional world.

As I mentioned earlier, one of the most important functions that political parties serve in democracy is to *represent* various interests in the electorate. Political parties in the United States were first created as gatherings of like-minded people (Dawson 2000), but were developed later into current forms by mobilizing and representing interests of voters (Holt 1992). Now, we cannot think of political parties without considering the core values that they support in and outside the government.

The interests that political parties represent are fundamentally multidimensional in nature. Interests often can concern the most salient liberal-conservative dimensional issues, but they also can concern less salient but long-standing interests such as urban-rural conflicts. Additionally, issues can concern a completely new dilemma that appears all of a sudden. In general, interests in the electorate are diverse and heterogenous over the regions, and change over time.³

As a result, the policy space in Congress is also multidimensional. In many cases, a package of several dimensional issues is usually attached to the political party (Campbell et al. 1960). There are even clear and sometimes sharply drawn lines between the two parties (Aldrich 1995). However, these distinctions are tendencies, not certainties. Each political party is a coalition of many and diverse groups (Sundquist 1983). Furthermore, what issues constitute the multidimensional policy space vary over time and across different groups of legislators.⁴

Poole and Rosenthal (1997) argue that, “the first dimension, throughout most of American history, has captured the main economic conflicts between the two major political parties” (114). Economic conflicts that belong to the liberal-conservative dimension have been

³With a slightly different focus, pluralism literature (e.g., Dahl 1962) explicitly deals with why this is the case and how this becomes a general trend in the United States.

⁴The literature on the “party system” (e.g., Sundquist 1983) explicitly examines how this has evolved in American history.

the first and the most salient dimension throughout American history, and have served as a default cleavage both in the government and in the electorate. However, this first dimension has *not* entirely dominated other dimensions for all policy areas over time (Crespin and Rohde 2007; Roberts, Smith and Haptonstahl 2008). In fact, Poole and Rosenthal (1997) could not accurately *observe* other dimensions because their NOMINATE technique inevitably favors the discovery of low dimensionality.⁵

More important, I argue that political parties have utilized the presence of this salient “first” dimension. Because the liberal-conservative dimension has been a default cleavage between the two parties, observing this dimension automatically leads to a partisan division, which ultimately increases the unity of party members in voting. Or, it could be the case that the presence of salient “first” dimension is the result of constant and long-term strategic endeavors that two political parties intentionally have pursue. By and large, some unidimensional setting that we observe in Congress could be a by-product of a party’s effort to structure the choice sets.

At the same time, I also argue that political parties who have heavily utilized the liberal-conservative dimension in the past would be vulnerable to the threats of cross-party coalitions. These coalitions are usually formed to pursue their own collective policy interests, possibly multidimensional policy interests. An electoral consideration is also involved because their collective policy interests, in most cases, come from their constituents.

Chapter 2 deals with the later claim that political parties, especially the majority party, are vulnerable to the threats of cross-party coalition if the policy space in Congress is not constrained to be unidimensional. In addition, chapter 4 examines the former claim that the unidimensional policy space in Congress is a by-product of party’s efforts to structure the choice sets of individual members.

⁵This is due to the orthogonality assumption that their spatial voting model has.

Conditional Nature of Rules Changes

Chapter 2 examines why the U.S. House of Representatives has changed its standing rules regarding the principles of majority rule and minority rights. When there is a suppression of minority rights, it is considered “pro-majority” change. When additional minority rights are created, it is “pro-minority” change. I begin by taking a critical look at previous studies on this subject, Binder (1996) and Schickler (2000), after which I propose an alternative theory on the conditional nature of rules changes.

Binder (1996) emphasizes the “strength” of the majority party, which is composed of the party’s seat share and ideological homogeneity. A strong majority party (with a large size and/or homogeneous members) tends to promote pro-majority changes while a weak majority allows pro-minority changes. Schickler (2000), on the other hand, focuses on the role of the median member of the House floor. He argues that when the floor median moves toward the majority party, it is likely to have pro-majority changes. Alternatively, when the floor median moves toward the minority party, pro-minority changes are likely to occur.

These previous accounts are, however, limited in that a single factor in each description drives both directions of rules changes. We must not simply assume that one factor explains two types of changes at the same time. Rather, we have to empirically test whether or not there exist multiple factors in promoting rules changes in the House.

In contrast, I argue that House rules changes have a conditional nature. First, the two types of changes are fundamentally different in nature. Pro-majority changes largely favor the majority party leadership and the majority party in general, but pro-minority changes are not exactly opposite. I posit that pro-minority changes have occurred to promote the interests of explicit cross-party coalitions (from the progressive coalition in the 1910s to the conservative coalition until the 1960s), whose common policy interests were not aligned with the traditional liberal-conservative dimension. Therefore, the dimensional structure is essential for pro-minority changes, but not for pro-majority changes.

Second, the two sub-factors (size and homogeneity) should be analyzed separately because they are negatively correlated with each other, and the floor median's move is actually a function of both factors. A large majority can afford to push pro-majority changes regardless of dimensional regime types. In contrast, a small majority is vulnerable to pro-minority changes only under the two-dimensional regime, where the cross-party coalition has their own policy interests to pursue. A homogeneous majority promotes pro-majority changes without a difficulty whereas a heterogeneous majority has little impact on pro-minority changes: a withdrawal of power also requires the collective action.

I employ the multinomial logit model in order to assess the conditional nature of rules changes (in contrast to Binder's two logits or Schickler's ordered logit). I find that different combinations of factors are required for the two distinct types of rules changes. In particular, the size and the homogeneity of the majority party are the main factors for pro-majority changes while the size of the majority party and the dimensionality of policy space are the main factors for pro-minority changes.

It is worth reemphasizing that this chapter shows a nice example of the need for multiple approaches. First, I deal with multiple goals and possible conflicts of these goals. The collective policy goals of the majority party is a driving force for pro-majority changes that promote majority rule. Multidimensional policy goals and electoral goals are the basis for cross-party coalitions, which advocate changes for minority rights. So, rules changes are fundamentally based on the conflict between collective partisan goals and individual member's goals (but mobilized as cross-party coalitions). Second, this conflict is reinforced with the role of dimensionality. Under the multidimensional policy space, cross-party coalitions are more easily formed and become powerful threats to the majority party. This is not the case under the unidimensional regime. With multiple goals and the multidimensional regime in place, we require multiple theoretical approaches.

Special Rules and Dimensionality

Chapter 4 is one of the first attempts to investigate the determinants of dimensionality for individual bills. Some have argued for a unidimensional Congress while others have shown multidimensionality in the congressional voting alignment. Recent studies show that levels of aggregation contribute these different characterizations of congressional policy space. However, at every level of aggregation, there is variation in dimensionality to be explained. In particular, individual bills are subject to a careful examination because most spatial theory accounts of Congress are based on an assumption of dimensionality at the bill level. I aim to assess the determinants of this variation in dimensionality by focusing on the role of restrictive special rules in the House of Representatives.

My theory on partisan manipulation of dimensionality actually benefits from the partisan perspective of Cox and McCubbins (1993, 2005) and the heresthetics theory of Riker (1986). First, Cox and McCubbins' partisan perspective suggests that political parties have an incentive to create a unidimensional voting bloc. Since the liberal-conservative distinction is the default cleavage in Congress, a voting coalition is most easily constructed along this liberal-conservative dimension. With this voting bloc occurring regularly, the party image or the party brand name is clearly reinforced over time. In addition, political parties can avoid unpredictable defeats due to multidimensional voting.

Second, my partisan manipulation theory builds upon Riker, and argues that a well-designed special rule could effectively produce a unidimensional voting record. When the bill is reported on the floor, party leaders could include several amendments that belong primarily to the liberal-conservative dimension with the hope that this new (but liberal-conservative) dimension becomes the salient "secondary" dimension about which Riker spoke. Then, party leaders can have their preferred outcome, and, at the same time, minimize the possible influence of unexpected dimensions to ruin the contents of the pre-arranged bill. As a result, the final voting record looks as if it were unidimensional.

To investigate, I collect every piece of “major legislation,”⁶ and record the contents of their special rules. Ultimately, the data demonstrate that restrictive rules contribute to lower dimensionality. As such, the findings strongly support my partisan manipulation theory, and ultimately the partisan perspective in general as an explanation of the relationship between restrictive rules and dimensionality. Political parties and party leaders utilize restrictive rules in order to manipulate dimensionality.

While Chapter 2 deals with the consequence of multidimensional policy space in Congress, this chapter suggests a possible origin of unidimensional voting assignment at the individual bill level. Political parties and their leadership intentionally reduce the dimensionality of bills in order for the collective partisan policy goals as well as for some electoral goals. The collective partisan policy goals are to create an easy voting coalition with a favorable party brand name. The electoral goals are to generate a clear but not-ugly image of the party. Therefore, it would be fair to say that multiple goals of political parties are deeply related with the low level of dimensionality in Congress.

1.4 Committee Composition and Political Parties

In Chapter 3, I consider a situation where the informational function by committees (the core argument by the informational perspective) can also serve the interests of the majority party. This is a nice combination of the informational perspective and the partisan perspective. I adopt the partisan perspective because my primary concern is the relationship between the majority party leadership and the majority party committee delegations. I also adopt the informational perspective because committees are supposed to provide an expertise on policies so my focus is on the informational role of minority party committee delegations.

⁶They are identified by Clinton and Lapinski (2006)

Legislative Theories on Committee Bias

In fact, the question that this chapter raises is originated by the literature on committee bias. First, all three major theoretical perspectives have discussed *whether or not* committees are composed of outliers. The distributive perspective argues that committee members are highly unrepresentative of the House because they have high demands for the policy outcomes of their jurisdictions. Members of certain committees get more benefits from the policies in their jurisdictions than non-members (Weingast and Marshall 1988). And, members whose districts need higher demands for certain policy benefits usually get assigned to a committee that controls those policies (Adler and Lapinski 1997).

Both the informational and the partisan perspectives argue against the distributive perspective on committee bias. Since the chamber as a whole and the political party serve as principals of committees, committees should be representative of their principals. By using various interest-group ratings, Krehbiel (1990, 1991) shows no difference between committee medians and the floor median. By using both ADA and NOMINATE scores, Cox and McCubbins (1993) also show no difference between the majority party medians in “partisanly-important” committees and the majority party median as a whole.

Another angle to the committee outlier issue is to examine the self-selection process of the committee assignment. Shepsle (1978) analyzes the committee request data of the Democratic Party, and concludes that the committee assignment has been largely a self-selection process: individual members request the committee membership based on their needs (largely electoral needs or goals), and the party’s Committee on Committees mostly accommodates the requests based on the demand-and-supply base. Smith and Ray (1983) do a pre- and post-reform comparison, and find that the self-selection process continued even after the reform of the 1970s.

Although the self-selection process has been used to argue for the distributive perspective, it does not logically or empirically lead to committee outliers in an automatic way. Multiple needs from heterogeneous members as well as from two different parties cancel out the outlier effects, which is observationally equivalent to the consequence of the informational perspective (Frisch and Kelly 2005). Moreover, as argued in the partisan perspective, the party leadership allows self-selection because it does not get harmed by, and sometimes benefits from, the self-selection process.

The debate on the *existence* of committee bias (or high-demand outliers) is not the end of the story. Scholars also have tried to identify the *conditions* under which committees become more unrepresentative of their principals (either the parent chamber or the party caucus). At the same time, a methodological debate revolves around how we measure the concepts of bias and outliers.

Hall and Grofman (1990) carefully examine the logic of the distributive perspective on committee bias, and specify conditions under which committee bias can be observed. First, we have to use jurisdiction-specific measures. Second, we must look at committees whose jurisdiction is narrow and homogeneous. Third, if the committee's jurisdiction is broad, then the bias can be observed in the subcommittee levels. Hall and Grofman use constituency-based and agriculture-specific measures to examine the Agriculture Committee and several Agriculture Subcommittees, and find considerable bias on the committees.

On the other hand, Gilligan and Krehbiel (1990) utilize a signaling model, and derive the conditions under which committees should have preference outliers. The larger the cost to specialize in the committee, the more extreme are the optimal committee preferences. And, the greater the uncertainty in the policy environment, the less extreme are the optimal committee preferences.

Based on the externality of policy outcomes produced by the committee, Cox and McCubbins (1993) classify committees into three categories: uniform-externality, targeted-

externality, and mixed-externality committees. Since every member should be equally interested and equally uninterested in the jurisdictions whose policies are uniformly distributed among constituencies, the uniform-externality committees tend to be microcosms of their party caucus. On the other hand, targeted-externality committees could attract interested members whose reelection probabilities depend on the committee's policy outcomes, which indicates unrepresentativeness of committee members.

Maltzman (1995) focuses on the salience of committee's jurisdictional issues. Committees that address issues of high salience are more likely to adopt the view of their parent chamber because these committees' choices are more likely to be scrutinized by the floor. With the similar logic, party delegations on highly salient committees are more likely to be representative of their party caucus. By utilizing jurisdiction-specific roll calls, he finds that prestige and policy committees (high- and medium-salience committees) are more representative of the chamber than constituency committees (low-salience committees). And, constituency committees are composed of more unrepresentative majority party delegations than policy and prestige committees.

Hurwitz, Moiles and Rohde (2001) posit that, since the policy output from even a single committee could be multi-dimensional, committee bias depends on the dimension with which the policy is aligned. By looking at voting records for multiple amendments, they find that agriculture policies in the 104th House contain two major dimensions (distributive and partisan dimensions), and that committee members are unrepresentative of the chamber only for distributive dimensional amendments. As for partisan dimensional amendments, committee members show voting patterns fairly representative of their party caucuses.

There are two notable patterns in the line of research on committee assignments and committee bias. First, it has focused only on principal-agent relationships: committee vs. parent chamber and party delegation vs. party leadership. It has ignored the inter-party relationship. Chapter 3 adds one more element to the theory: majority party leadership on

the floor vs. minority party delegations on committees. Given that there are minority party members on committees, the majority party could come up with a strategy to deal with minority party members. The majority can choose to eliminate the minority representation entirely from the committee system. If this option is infeasible or if this option is worse for the majority party, then what does the majority party leadership do? These are the questions to be answered.

Second, with the exception of the pure informational perspective, committees are treated as if they serve mainly for members' electoral goals. The role of political parties are involved, but only through the heterogeneity of committee jurisdictions (Cox and McCubbins 1993) or the salience of committee outputs (Maltzman 1995). In Chapter 3, I rely only on the pure policy goals of individual members on committees, and demonstrate the conflict between individual goals and collective partisan goals. Moreover, I show that, even under an exceptionally partisan setting (i.e., the majority party entirely dominates the policy making both in committees and on the floor), a bipartisan arrangement appears due to this conflict.

Minority Party Members on Committees

The chapter starts by asking why a generic legislature allows minority party members on committees. In other words, why does the majority party tolerate minority party members on committees? If the majority party considers the minority a burden, then it could choose to exclude the minority party members entirely from the committee system. This has, however, rarely happened in history. This rarity suggests the question: What benefits do minority party members on committees provide to the majority party on the floor? I provide one possible explanation to this question via a simple signaling game.

There are three players in the game: the majority party committee delegation, the minority party committee delegation, and the majority party leadership. They collectively choose

the policy, but the uncertainty is attached to the policy choice when it is implemented in a real world. Since this uncertainty is observable only by committee members (from both parties), the majority party leadership requires them to send signals: the bill proposal by the majority party committee delegation and the public speech on the uncertainty by the minority party committee delegation. Then, the majority party leadership simply accepts or rejects the bill proposal upon receiving signals.

The majority leadership's ultimate decision in the game is then whether or not it constructs the committee system by including the minority party delegation in addition to the majority party delegation: Majoritarian Committee System (with only the majority party delegation) vs. Bipartisan Committee System (with both the majority party and the minority party delegations).

I argue that, in equilibrium, the majority leadership has an incentive to include the minority party delegation on the committee. Specifically, the majority party can be better off under the Bipartisan setting than under the Majoritarian setting. This stems from the fact that the minority delegation makes a public speech about the uncertainty. Although the minority delegation does not have any bill proposal power in the model, it constrains the majority delegation in a way to serve the majority leadership in general: the majority delegation, in equilibrium, moderates the bill proposal in order to respond to the minority's public speech.

This constitutes an informational rationale for the presence of minority party members on committees. Without relying on normative arguments or a repeated game framework, I show that the majority party can expect to be better off by having minority party members on committees.

While this chapter and the other two chapters look disconnected at first, the core message that I would like to reiterate is actually quite simple: we require multiple theoretical approaches in order to better understand an interesting phenomenon in Congress.

The general and overarching theme of the dissertation is the role of political parties in the U.S. House. Political parties have been the main device in Congress that structures the legislative motivations and interests so that multidimensional interests result in stable policy outcomes. At the same time, an extensive focus is given to a combined use of multiple theoretical approaches. In this sense, the dissertation as a whole proposes a new direction of research. However, each chapter itself could also be understood as a separate stand-alone essay with its own theoretical and empirical contributions to the discipline. As such, three essays follow and the dissertation concludes by suggesting future research.

Chapter 2

Conditional Nature of Rules Changes

Congressional scholars have paid special attention to how the U.S. Congress has evolved over time. One group of these scholars has focused on explaining specific aspects of Congress, including the emergence of political parties (Hoadley 1980; Holt 1992; Dawson 2000), standing committees (Gamm and Shepsle 1989), Senate leadership (Gamm and Smith 2002*a,b*), and the filibuster (Binder and Smith 1997; Wawro and Schickler 2006). Another group has focused on building a general theory of Congress, including the distributive perspective (Weingast and Marshall 1988), the conditional party government thesis (Rohde 1991; Aldrich 1995), the informational perspective (Krehbiel 1991), the party cartel theory (Cox and McCubbins 1993, 2005), and the pivotal politics thesis (Krehbiel 1998).

At the intersection of these rich research agendas, a prominent recent debate revolves around why the House of Representatives has changed its rules regarding the majority rule and the minority rights: Binder's 1996 *APSR* article versus Schickler's 2000 *APSR* article. This debate is interesting not only because both authors try to understand the same facet of Congress based on almost identical data, but also because their competing claims can be

combined and resolved into a unified theory. If we use a more appropriate methodology, we can determine the conditions under which each account best fits the historical record.

By proposing a new statistical model with a fresh set of factors, this paper argues that rules changes are conditional in nature. In essence, I find strong evidence that different combinations of political factors are required for different types of rules changes in the House. In particular, the size and the homogeneity of the majority party are the main factors for pro-majority changes. Additionally, the size of the majority party and the dimensionality of polity space are the keys for pro-minority changes.

I first explain rules changes could be conditional in nature. Then, I examine the previous statistical approaches to this subject and propose a more appropriate model. The empirical analysis follows and the chapter concludes by restating my alternative theory of the conditional nature in House rules changes.

2.1 Perspectives on Rules Changes

Under what conditions has the House changed its rules? One notable starting point is a macro or organizational approach. Polsby (1968) and Cooper and Young (1989), for example, argue that the institutional change in the U.S. Congress is a product of external demands. As the role of the House grows, the floor agenda expands, and the time on the chamber becomes more valuable, the House tends to limit individual members' rights and design effective procedural tools. The argument implies a monotonic reduction in individual or minority rights over the long term.

A contrasting micro approach relies on an assumption that the institutional change reflects the aggregate outcome of individual members' utility calculations. The party cartel theory argues that the majority party, in general, dictates the procedures in the House, and that, therefore, rules changes as well as rules themselves largely benefit the majority party

(Cox and McCubbins 1993, 1997). In addition, the majority party has exercised a negative agenda control power, which effectively prevents unfavorable outcomes from being implemented on the floor (Cox and McCubbins 2005). Therefore, any institutional change is necessarily a minor adjustment under the general pattern of majority party control over the House.

However, there has been a historical variation in partisan control over the procedures. For example, the conditional party government thesis (Rohde 1991; Aldrich 1995) is that we observe a more centralized party control in the House as the majority party becomes more cohesive and as the two parties become more distinct from each other. This implies variation in individual and minority rights. Rules changes depend on the internal politics within the majority party as well as on the inter-party polarization between the majority and the minority parties.

With a slightly different focus, the disjointed pluralism perspective (Schickler and Rich 1997; Schickler 2001) provides that different interests are important for different periods of time in determining the institutional change. Majority party interests have not entirely dominated rules changes in Congress. Rather, there have been some other interests or forces, such as cross-party coalitions, power-oriented individuals, and etc.

In line with this approach, Dion (1997) examines the strategic interaction between the two parties. When the majority party becomes smaller, it tends to behave in a more cohesive way. Consequently, the “frustrated” minority party is more likely to obstruct the process.¹ As a result, the majority party needs rules changes that can possibly prevent obstructions by the minority party.

A more direct debate on this subject occurs between Binder’s 1996 *APSR* article and Schickler’s 2000 *APSR* article. Each of them traces two types of rules changes: creation

¹Dion uses three measures for the minority obstructions. But, only one of them - the number of missing quorums - shows the conventional statistical significance at 5% level.

and suppression of minority rights. They argue that there are *pro-minority* and *pro-majority* changes, and test whether the majority party or the floor median has played an important role in rules changes.

Binder (1996) emphasizes the partisan “capacity” of the majority party. The partisan capacity means the relative strength of the party as compared with the opposition party. Party strength usually consists of the size of the party (i.e., the number of members in the party) and the cohesiveness of the party members: (1) a large majority party tends to become stronger, and (2) cohesive party members are more likely to intensify the partisan capacity.² Her claim is that the stronger the majority party is relative to the minority party, the more likely it is that the majority party will suppress minority rights. In addition, she argues that the weaker the majority party is relative to the minority party, the more likely it is that a cross-party coalition will create new minority rights.

In contrast, Schickler (2000) examines the role of the floor median, which is the crucial factor in Krehbiel’s pivotal politics framework. Following the tradition of Downs (1957) and Black (1958), the floor median, for the most part, captures the majoritarian nature of congressional decision making. Schickler’s claim is that rules changes that advantage the majority party are more likely when the floor median moves toward the majority party, and that rules changes that reduce the majority party’s advantage are more likely when the floor median moves away from the majority party (i.e., moves toward the minority party). The upshot of his finding is that when the ideological balance component (i.e., the movement of the floor median) is included in the multivariate model, the importance (as well as the statistical significance) of Binder’s partisan capacity component substantially weakens.

Binder (2006) revisits the debate and tries to incorporate Schickler’s findings. Her main contribution is to expand the data to all Congresses. She finds that her former claim

²Binder (1996)’s theoretical expectation for the majority party size is the exactly opposite of Dion (1997)’s. Later in the chapter, we will see whose expectations better comport with the data.

on the suppression of minority party rights is still relevant for the longer time span, and that the ideological balance by the floor median becomes significant only in the post-Reed congresses. Therefore, she infers, different political forces affect the House rules changes in different periods of time.³

When we see just the arguments and the evidence provided by the two scholars, we are likely to conclude that, at least in the post-Reed Congresses, Schickler's evidence is stronger than Binder's. But it is not that simple. First, key explanatory variables in their models are highly correlated with each other, which requires us to investigate them in a greater detail. Second, they use different statistical models and neither of their models is an appropriate fit to both the theory and the data. By showing the above two points, I propose a new theory on the conditional nature of rules changes in the House.

2.2 Conditional Nature of Rules Changes

My theory on the conditional nature of House rules changes builds upon the general agreement with the disjointed pluralism perspective: no single interest drives the institutional change. Certainly, we must *not* simply assume that one factor explains two types of changes at the same time. Rather, we have to empirically test *whether or not* there exist multiple factors in promoting rules changes in the House when there are good theoretical reasons to do so.

There are two main reasons why House rules changes could have a conditional nature. First, the two types of rules changes that Binder and Schickler identify are fundamentally different. Pro-majority changes largely favor the majority party leadership and the majority party in general, but pro-minority changes are *not* exactly opposite to pro-majority changes.

³Note that this is similar to the disjointed pluralism perspective.

Pro-minority changes could be the changes that promote the rights of *individual* members, certain *committees*, or the *minority party* in general. They could also benefit some groups *within* the majority party or others *across* the two parties. While pro-majority changes are mainly *partisan* changes, pro-minority changes are *not* necessarily partisan. It is possible that different types of changes require different dynamics.

In this sense, I focus on the role of *dimensionality* in policy space. This actually comes from an observation that pro-minority changes only occurred during a certain period: 1909-1967. This is a period when we had “explicit” cross-party coalitions in the House. They include the progressive coalitions in the 1910s, the farm bloc in the 1920s, the New Deal coalition in the 1930s, and the Conservative Coalition from the 1930s to the 1960s.

These groups voted together because they had common policy interests that were not always aligned with the traditional liberal-conservative dimension. A frequent cross-party voting alliance with common policy interests inevitably makes the policy space look two-dimensional. And, under this two-dimensional regime, cross-party coalitions are more likely to protect their own policy interests by promoting pro-minority changes. Two-dimensional regime may not be a driving force *per se*, but pro-minority changes may occur only when the House is two-dimensional. Therefore, a two-dimensional regime is a necessary condition for pro-minority changes, if not a sufficient condition.

Second, the key “driving force” for House rules changes that Binder and Schickler stand for are actually composed of *multiple* sub-factors. Binder’s “Partisan Capacity” is simple: it is *defined* as a composite of the size and the homogeneity of the majority party. Schickler’s “Floor Median” is a little more complicated. Wiseman and Wright (2008) have recently shown that the movement of the House median is mainly a *function* of two partisan factors: the size and the homogeneity of the majority party.⁴ While these multiple sub-

⁴The Technical Appendix at the end of this chapter shows empirical evidence for their argument (with my data). Observe that the R^2 there is very high (0.73).

factors happen to be the same, different combinations in existence and/or strength of the two sub-factors, along with the role of dimensionality, could influence different types of rules changes.⁵

Moreover, we have good reasons to examine each component separately. The size and the homogeneity of the majority party do not move together, as shown in Dion (1997).⁶ For example, when the size becomes smaller, the majority party tends to be more homogeneous. Under the expectations of both Binder (1996) and Wiseman and Wright (2008), the two forces cancel with each other in influencing the direction of rules changes. So, if we have only the multiplicative term,⁷ then it would be impossible to determine if it is size or homogeneity that matters. To figure out which factor plays a more important role is, therefore, a crucial task for understanding the dynamics of rules changes.

Consider the size of the majority party. Even though it has been ignored for a long time by the general congressional organization literature,⁸ it has recently received some attention (Smith 2007). According to him, the size of the majority party plays an important role because, when pursuing a partisan goal, a large majority party would reduce the level of sacrifice in both policy and electoral considerations. Therefore, with the same logic, a large majority party can more likely *afford* to push pro-majority rules changes.⁹ And, this would also apply to the two-dimensional regime because a really large majority can more easily overcome the threats by cross-party coalitions.

⁵Some might argue that this happened at random. However, the empirical correlation between “Partisan Capacity” and “Floor Median” (with my data) is 0.72. This is not random, but systematic.

⁶The empirical correlation between size and homogeneity (with my data) is -0.33.

⁷In fact, the multiplicative term can be used only when one component is meaningless without the other component (Brambor, Clark and Golder 2006, 68-69). And, this is not the case here.

⁸The example includes the distributive perspective, the informational perspective, the conditional party government thesis, the party cartel theory, and the pivotal politics framework.

⁹Note that this is similar to Binder (1996), but is different from Dion (1997).

In contrast, a small majority is vulnerable to cross-party coalitions if they want to pursue their own policy interests. Under the one-dimensional regime, a cross-party coalition might not be *enthusiastic* enough to pursue pro-minority rules changes even when facing with a small majority. However, if the House is two-dimensional *and* if the majority party becomes smaller in size, then a cross-party coalition is more likely to be enthusiastic enough *and* powerful enough to promote pro-minority rules changes in order to guarantee their own policy interests.

Next, consider the homogeneity of the majority party. In general, it is a major factor that enables rank-and-file members to delegate greater authority to their leadership (Cooper and Brady 1981; Rohde 1991; Aldrich 1995). In addition, the party cartel thesis puts its emphasis on this factor when explaining the variation in positive agenda control by the majority party (Cox and McCubbins 2005). Therefore, when the majority party becomes more homogeneous, the party is more likely to change rules in its favor.

What is not certain is the role of heterogeneity. One can easily expect that a heterogeneous majority party is more likely to drive pro-minority changes because the internal divisions are likely to produce cross-party cooperation. However, even though the majority party becomes heterogeneous, there is no explicit reason why rank-and-file members *must* and *can* withdraw their delegation from the leadership. A withdrawal of power is also burdensome, and thus requires a solution to the problem of collective action. Therefore, a heterogeneous majority party is expected to have little effect on promoting pro-minority changes. And, if there is any effect, then it should be a limited mixed one.

In sum, I have three main hypotheses on the conditional nature of House rules changes:

- **Hypothesis 1 [Conditional Nature]** *Different combinations of factors are required for the two distinct types of rules changes.*

- **Hypothesis 2 [Majority Size and Dimensionality]** *Pro-majority changes are more likely when the majority party becomes larger, regardless of dimensional regime types. Pro-minority changes are more likely when the majority party becomes smaller, especially under the two-dimensional regime.*
- **Hypothesis 3 [Majority Homogeneity]** *Pro-majority changes are more likely when the majority party becomes more homogeneous. Pro-minority changes have little systematic relationship with heterogeneity of the majority party.*

An alternative way to word these hypotheses is that (1) as for pro-majority rules changes, the *size* and the *homogeneity* of the majority party are the main factors, and (2) as for pro-minority rules changes, the *size* of the majority party and the *dimensionality* of policy space are the main factors.

2.3 Data and Methods

The unit of analysis for this paper is a single Congress. Since each Congress has a two-year term, the data is biennial. The time period of analysis is 1867 to 1998, from the 40th Congress to the 105th Congress (following Schickler's choice), which provides sixty six observations in total.

The outcome variable is rules changes for a given Congress (RULES). Out of 66 Congresses, 29 have exactly one type of rules changes affecting minority rights, 32 have no rules change affecting minority rights. The remaining five Congresses¹⁰ have two types of changes at the same time per Congress, one favoring the minority rights and one favoring the majority party. A Congress is coded as -1 if there is only one type of rules changes

¹⁰They are 44th, 46th, 52nd, 91st, and 103rd Congresses. Following Schickler's coding, I treat these changes as equivalent to no changes.

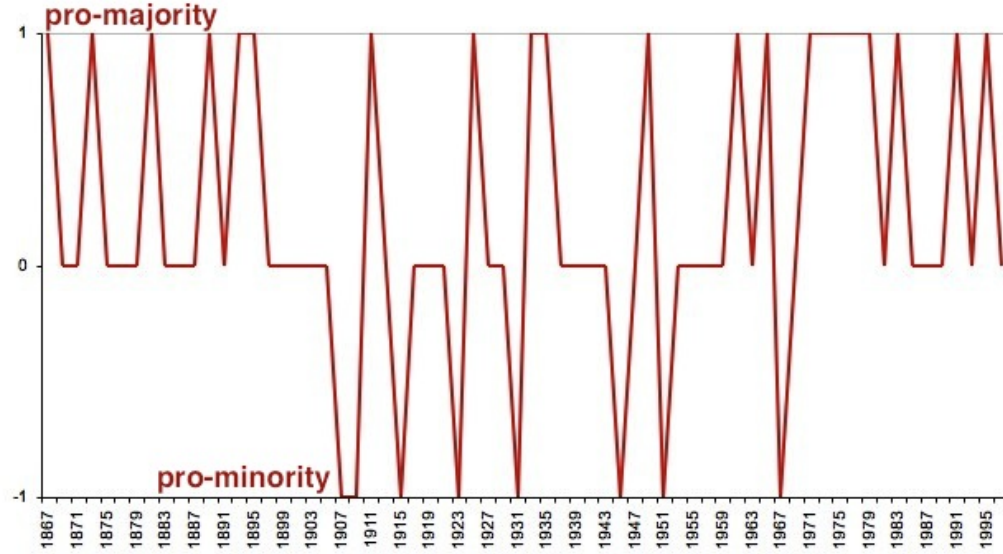


Figure 2.1: House Rules Changes over Time

which promotes the minority rights, 1 if there is only one type of rules change which favors the majority party, and 0 if (a) there is no change or (b) there are two countervailing rules changes.¹¹ There are 8 pro-minority changes (12.12%), 21 pro-majority changes (31.82%), and 37 no or neutral changes (56.06%) The data come directly from Schickler (2000, Appendix A), and Figure 2.1 nicely shows the the distribution of outcome variable (RULES) over time.¹²

¹¹Having only no change in this category does not produce a different conclusion

¹²Different authors use slightly different version of the list. However, I simply follow Schickler's list in order to provide continuity. Because this variable is time-series data, there might be a concern about the independence among observations. Moreover, in a substantive sense, rules changes inevitably suffer from the path dependence (Binder 1997; Roberts and Smith 2007). However, it is crucial in maximum likelihood estimation that the outcome variable is independent across observations. Without this property, the log likelihood function cannot be easily constructed as usual. While there is no widely accepted test for the time dependence of categorical outcomes, we can fit AR(1), \dots , AR(20) and U(1) models by treating the outcome as continuous. Doing this reveals no evidence that the outcome variable has any time dependence. Another application of the same data (Pang 2008) shows no serial correlation in errors to be corrected for several categorical variable models. Even though it is not completely safe to assume pure independence, the no-dependence assumption simplifies the subsequent analysis. Furthermore, both Binder and Schickler use the maximum likelihood estimation. So, my assumption is not an exception.

Table 2.1 demonstrates operationalization of all explanatory variables. “Partisan Capacity” (CAPT) and “Floor Median” (MED) are main explanatory variables for Binder and Schickler. They are used mainly for replications and model comparisons. The key explanatory variables for my theory on the conditional nature of rules changes are “Majority Size” (MAJPCT), “Majority Homogeneity” (HOM),¹³ and “Two-Dimension” (2DIM), corresponding to the hypotheses above. And, two control variables - “Polarization” (POL) and “Republican Majority” (MAJ) - are also included. I collect the DW-NOMINATE data from Poole and Rosenthal’s Voteview website¹⁴ and historical party division data from the Office of the Clerk.¹⁵ These data were also used by Schickler (2000).

When estimating models and testing hypotheses, it is crucial to choose an appropriate statistical model. Specifically, the model choices by Binder (1996, 2006) and Schickler (2000) are actually *not* suitable for testing the first hypothesis raised above. This hypothesis is about the conditional nature of House rules changes, which is the essence of this paper.

Binder uses two logit models.¹⁶ For analyzing the suppression of minority rights (i.e., pro-majority changes), her outcome variable is coded as 1 if there was a pro-majority change and 0 otherwise. For analyzing the creation of minority rights (i.e., pro-minority changes), her outcome variable is coded as 1 if there was a pro-minority change and 0 otherwise. The problem is with her outcome variable. By using a binary logit model to

¹³Throughout this paper, the ideology measure is the first-dimensional DW-NOMINATE scores, estimated by Poole and Rosenthal (1997). Of course, there are some limitations to the usage of DW-NOMINATE scores to measure the ideology of congressional members. But, up to now, we do not have a better measure to avoid the criticism. And, partisan aspects measured by using DW-NOMINATE scores are known to provide a good fit to the observed behavior. So, in spite of the limitations, I rely upon DW-NOMINATE scores.

¹⁴<http://www.voteview.org/>. Accessed on December 4, 2006.

¹⁵<http://clerk.house.gov/>. Accessed on December 4, 2006.

¹⁶In her original 1996 paper, she only uses one logit model for the suppression of minority rights. For the creation of minority rights, she simply compares descriptive statistics, where she finds the same evidence for her partisan theory. However, in her 2006 paper, she tries two models for both rules changes.

Table 2.1: Operationalization of Variables

Explanatory Variables		Measurement
Majority Capacity*	CAPT	$\text{MAJPCT} \times (1/\text{MAJSD}) - \text{MINPCT} \times (1/\text{MINS})$
Floor Median*	MED	$ \text{FLMED} - \text{MINMED} - \text{FLMED} - \text{MAJMED} $
Majority Size*	MAJPCT	% of seats held by the majority party
Majority Homogeneity*	HOM	$(1/\text{MAJSD}) \div (1/\text{ALLSD})$
Two-Dimension	2DIM	1 if MPRE > 0.25 and 0 otherwise
Polarization*	POL	$ \text{MAJMED} - \text{MINMED} $
Republican Majority	MAJ	1 if the Republican Party is the majority party and 0 otherwise

Notations		Meaning
	MAJPCT	% of seats held by the majority party
	MINPCT	% of seats held by the minority party
	MAJSD**	standard deviation of majority party members' first-dimensional DW-NOMINATE scores
	MINS**	standard deviation of minority party members' first-dimensional DW-NOMINATE scores
	ALLSD**	standard deviation of all House members' first-dimensional DW-NOMINATE scores
	FLMED	median of all House members' first-dimensional DW-NOMINATE scores
	MAJMED	median of majority party members' first-dimensional DW-NOMINATE scores
	MINMED	median of minority party members' first-dimensional DW-NOMINATE scores
	MPRE ***	$(\sum_{j=1}^q [\text{errors by 1-dim model} - \text{errors by 2-dim model}]_j) \div (\sum_{j=1}^q [\text{errors by 1-dimensional model}]_j), j = \text{roll call vote}$

* When estimating models, “difference” measures of the variables are used (indicated by “d” at front).

** 1/sd because large standard deviation means less homogeneity (Aldrich, Berger and Rohde 2002).

*** MPRE captures the relative importance of the 2nd dimension as compared to the 1st dimension. It was first introduced by Poole and Rosenthal (1997) and revised by Roberts, Smith and Haptonstahl (2008).

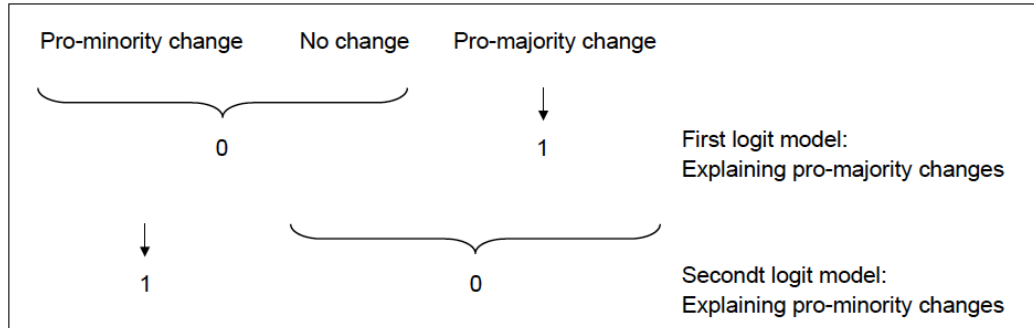
measure pro-majority changes, Binder treats all pro-minority changes as no change - or, does not differentiate pro-minority changes from no change. Neither her theory nor our conventional wisdom provide a rationale for this. The same problem arises when she analyzes pro-minority changes. She treats all pro-majority changes as no change. Figure 2.2 (a) depicts her choice of outcome variable. Because of this decision, Binder might estimate her interested changes incorrectly. We simply need to have a three-category outcome variable.

Schickler's model uses a three-category outcome variable. However, his outcome variable is *ordered* from pro-minority changes ($y = -1$) to pro-majority changes ($y = 1$) with no changes in the middle ($y = 0$). Therefore, the coefficients from his ordered logit model tell us the effect of explanatory variables when we move the outcome variable from pro-minority changes ($y = -1$) all the way up to pro-majority changes ($y = 1$). The coefficients do not explicitly tell us the effect of explanatory variables on the change of the outcome variable from *no change* ($y = 0$) to pro-minority changes ($y = -1$) or from *no change* ($y = 0$) to pro-majority changes ($y = 1$).¹⁷ Another way of saying this is that the ordered logit model cannot distinguish "what drives pro-minority changes" from "what drives pro-majority changes." Even though the model detects the importance of certain coefficients, there is no way to figure out which direction of rules changes (pro-majority or pro-minority changes) is caused by that explanatory variable. Figure 2.2 (b) illustrates Schickler's treatment of the outcome variable and the statistical model.

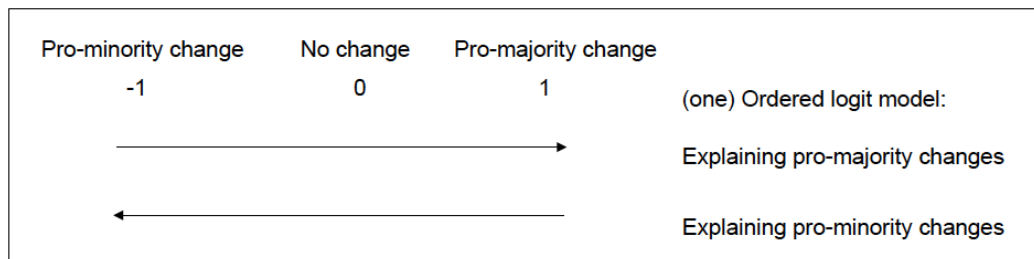
Therefore, the ordered logit model becomes problematic if, in reality, different types of explanatory variables cause different directions of rules changes. This situation is illustrated in Figure 2.2 (c). The status quo point is "no change." A certain factor leads to a

¹⁷This suggests that, unless a certain assumption is satisfied, the interpretation of coefficients from the ordered logit model might lead to a false conclusion. In the later section, I present the test of parallel regression assumption, after which it becomes more obvious why the ordered logit model is inappropriate.

(a) Binder (1996, 2006)



(b) Schickler (2000)



(c) Theoretical Interest

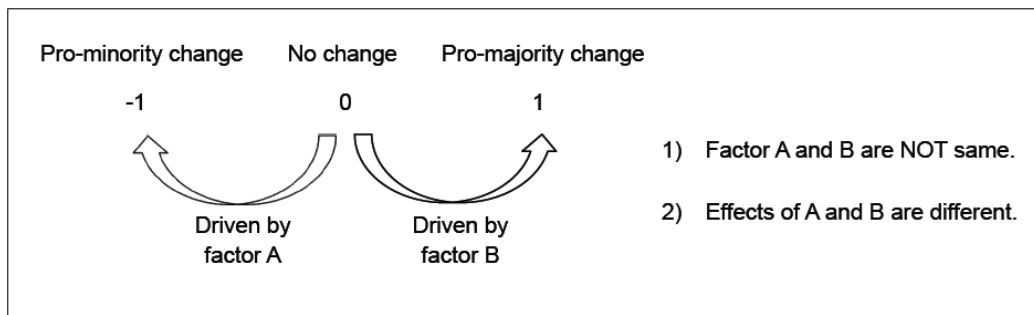


Figure 2.2: Drawbacks of Previous Model Choices

pro-minority change (factor A), and another leads to a pro-majority change (factor B). It could be the case that factor A and factor B are not the same one, and that the effects by factors A and B are not symmetric in their magnitude. Therefore, if we theoretically and substantively want to examine what makes the rules changes from no change ($y = 0$) to pro-majority changes ($y = 1$) and/or the rules changes from no change ($y = 0$) to pro-minority changes ($y = -1$), then the ordered model would not be an appropriate test of this theoretical claim.

Instead, I propose to use a multinomial logit model with “no change” as the base category. The multinomial logit model basically estimates two logit models where the first model includes only pro-majority changes and no change (excluding pro-minority changes) and the second model includes only pro-minority changes and no change (excluding pro-majority changes).¹⁸ If we adopt the multinomial logit model, then we are able to test *whether or not* the factors A and B, in Figure 2.2 (c), are different.

2.4 Empirical Analysis

The first step is to verify that my arguments are driven not by the data but by the model choice. Hence, I conduct replications of both Binder’s and Schickler’s models as well as my alternative model. Table 2.2 (a) is a replication of two logit models of Binder.¹⁹ Partisan Capacity (dCAPT) is always statistically significant across models with expected signs. Both in making pro-majority changes and in allowing pro-minority changes, the partisan capacity of the majority party is a driving force. Table 2.2 (b) is a replication of

¹⁸The difference between two logits and multinomial logit is that the latter estimates parameters in a more efficient way (Long 1997).

¹⁹In order to control for the effect of the conditional party government thesis, the models could have included variables such as dHOM and dPOL. But, due to the multicollinearity problem (condition number of $\mathbf{x}'\mathbf{x} > 100$), I intentionally exclude them.

ordered logit model of Schickler.²⁰ Floor Median (dMED) is always statistically significant across models with expected signs, and, equally importantly, Partisan Capacity (dCAPT) becomes not significant as argued in Schickler (2000).

Another important finding is that an alternative multinomial logit model in Table 2.2 (c) produces an interesting pattern that we could not observe from the above two models: *no* explanatory variable of interest is statistically significant across *all* outcomes. Rather, one and only one explanatory variable shows statistical significance in each direction of rules changes, and different explanatory variables are important for different types of rules changes.²¹ Therefore, a first look at the data and the preliminary statistical results show that the multinomial logit model is *theoretically* appealing, and that the first hypothesis on the conditional nature of rules changes appears to be true, at least in a naive sense.

A different approach to examine why the ordered logit model fails to capture this “conditional pattern” is to conduct a statistical test for the “parallel regression (PR)” assumption of the ordered logit model.²² In the language of Figure 2.2 (c), this PR assumption means that, given the factors A and B being the same, the effects toward the two different directions should be the same. If this assumption holds, we are free to use the ordered logit model of Figure 2.2 (b) and there might not exist the conditional nature in rules changes. However, as Table 2.3 shows, the two most important explanatory variables do not seem to fully satisfy the PR assumption. The two coefficients for Floor Median (dMED) are very dif-

²⁰Schickler (2000) presents multiple models with several collections of explanatory variables. Among others, I choose to show two important models: one testing against Binder (1996) and the other testing against the conditional party government (CPG) thesis. Throughout the discussion in this paper, however, the former is a main focus. One more thing to note is that the model could have included all variables at the same time. But, due to the multicollinearity problem (conditional number of $\mathbf{x}'\mathbf{x} > 100$), I intentionally choose two separate models.

²¹Note that statistical significance or non-significance is largely determined by large or small coefficient values, not by small or large standard-error values.

²²The Technical Appendix shows a more rigorous and detailed analysis on this.

Table 2.2: Replications and Alternative Model

(a) Binder (1996, 2006): Two Logit Models

	Model 1: Pro-Majority Changes [†]			Model 2: Pro-Minority Changes ^{††}		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Partisan Capacity: dCAPT	0.9897	0.3193	3.10	-0.8968	0.3450	-2.60
Republican Majority: MAJ	-1.2645	0.7130	-1.77	0.9705	0.8493	1.14
constant	-0.4545	0.3674	-1.24	-2.9241	0.7029	-4.16
N	65			65		
AIC	72.696			45.834		

Note: [†] Outcome variable is 1 if pro-majority changes and 0 otherwise. ^{††} Outcome variable is 1 if pro-minority changes and 0 otherwise.

(b) Schickler (2000): Ordered Logit Models

	Model 3: Against Binder [†]			Model 4: Against CPG [†]		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Floor Median: dMED	5.0826	2.5310	2.01	8.6630	2.1417	4.04
Partisan Capacity: dCAPT	0.5429	0.2907	1.87			
Majority Homogeneity: dHOM				0.8372	0.4960	1.69
Polarization: dPOL				4.7132	7.9311	0.59
Republican Majority: MAJ	-1.0942	0.5752	-1.90	-1.1063	0.5993	-1.85
intercept 1 2	-3.1503	0.6024	-5.23	-3.1719	0.6109	-5.19
intercept 2 3	0.5709	0.3657	1.56	0.6097	0.3712	1.64
N	65			65		
AIC	109.889			110.362		

Note: [†] Outcome variable is -1 if pro-minority changes, 0 if no change (or neutral changes), and 1 if pro-majority changes.

(c) Alternative: Multinomial Logit Model

	Model 5 [†]					
	Pro-Minority Changes			Pro-Majority Changes		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Floor Median: dMED	-12.5724	5.0311	-2.50	0.2643	3.1302	0.08
Partisan Capacity: dCAPT	-0.0049	0.4788	-0.01	0.8696	0.4158	2.09
Republican Majority: MAJ	0.6616	1.0105	0.65	-1.1372	0.7179	-1.58
constant	-3.1358	0.9958	-3.15	-0.3727	0.3771	-0.99
N	65					
AIC	111.0709					

[†] The base category is “No Change”.

Table 2.3: Test of Parallel Regression Assumption

Variables	Coefficients from j-1 binary regressions		Wald Test		df
	$y \leq -1$	$y \leq 0$	χ^2	$p > \chi^2$	
Floor Median: dMED	12.8641	1.2445	4.59	0.032	1
Partisan Capacity: dCAPT	0.1371	0.8754	1.62	0.203	1
Republican Majority: MAJ	-0.8266	-1.2261	0.12	0.732	1
constant	3.5963	-0.4739			

Note: This result is based on Model 3 in Table 2.2 (b).

ferent from each other (12.8641 vs. 1.2445), producing the Wald statistic of 4.59 ($p = 0.03$). The two coefficients for Partisan Capacity (dCAPT) are substantively different (0.1371 vs. 0.8754) even though statistically indistinguishable (Wald statistic of 1.62 with $p = 0.20$). Therefore, the two explanatory variables - Partisan Capacity (dCAPT) and Floor Median (dMED) - do not explain different rules changes in an equal weight.

The next step is to fully examine the conditional nature of House rules changes with the three hypotheses that I construct in the previous sections. The first hypothesis is about the conditional nature of rules changes: different combinations of factors are required for the two different types of rules changes. In order to test this hypothesis, I employ the multinomial logit model with “no change” as the base category. The second hypothesis is about the combined effect of the majority party size (Majority Size: dMAJPCT) and the dimensionality (Two-Dimension: 2DIM). To test this hypothesis, I include the interaction terms, and calculate a new set of coefficients and standard errors, following the suggestion of Brambor, Clark and Golder (2006). As for the third hypothesis on the role of the majority party homogeneity, I include Majority Homogeneity (dHOM) as a plain term. Finally, the possible effects of the inter-party polarization (Polarization: dPOL) and the Republican majority status (Republican Majority: MAJ) are controlled in the multivariate analysis.

Table 2.4 summarizes the results. Model 6 includes only plain terms and Model 7 includes interactions terms as well. First and foremost, three key explanatory variables of

Table 2.4: Multinomial Logit Model: Conditional Nature of Rules Changes

Model 6 [†]						
	Pro-Minority Changes			Pro-Majority Changes		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Majority Homogeneity: dHOM	-1.5016	1.1893	-1.26	2.0717	0.8953	2.31
Majority Size: dMAJPCT	-0.1783	0.0683	-2.61	0.1475	0.0573	2.57
Two-Dimension: 2DIM	2.4982	1.3985	1.79	0.2042	0.6887	0.30
Polarization: dPOL	6.8416	15.9854	0.43	6.7625	9.2006	0.74
Republican Majority: MAJ	1.1576	1.0968	1.06	-1.2430	0.7673	-1.62
constant	-4.7419	1.6861	-2.81	-0.5759	0.5677	-1.01
N	65					
AIC	117.3293					
Model 7 [†]						
	Pro-Minority Changes			Pro-Majority Changes		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Majority Homogeneity: dHOM	-0.9267	0.9488	-0.98	2.2544	0.9716	2.32
Majority Size: dMAJPCT ^{††} under 1-dim regime (2DIM=0)	-0.0199	0.1153	-0.17	0.2483	0.1069	2.32
Majority Size: dMAJPCT ^{††} under 2-dim regime (2DIM=1)	-0.2158	0.0802	-2.69	0.1195	0.0596	2.01
Polarization: dPOL	5.0518	15.5504	0.32	5.0819	9.6673	0.53
Republican Majority: MAJ	1.1322	1.1025	1.03	-1.3292	0.7989	-1.66
constant	-2.7619	0.8809	-3.14	-0.3161	0.3969	-0.80
N	65					
AIC	118.4374					

[†] The base category is “No Change”.

^{††} Calculated by the author based on the interaction model (Brambor, Clark and Golder 2006).

our interest have made selective influence on the two different types of rules changes. As for pro-majority changes, the size and the homogeneity of the majority party are shown to be main factors (dMAJPCT and dHOM). As for pro-minority changes, the size of the majority party and the dimensionality of policy space are shown to be main factors (dMAJPCT and 2DIM). The first hypothesis is confirmed with the data: there is a conditional nature in House rules changes.²³

The effects of Majority Size (dMAJPCT), in particular, depend on the dimensionality. Only under the two-dimensional regime, a small majority promotes pro-minority changes (coefficient of -0.2158 with z-value of -2.69). However, it has little effect on pro-minority changes if it is under the one-dimensional regime (coefficient of -.0199 with z-value of -0.17; observe a huge difference in size between two coefficients). On the other hand, a large majority has significant influence on making pro-majority changes under both dimensional regimes. The net effect is a little larger under the one-dimensional regime (coefficient of 0.2483 with z-value of 2.32) than under the two-dimensional regime (coefficient of 0.1195 with z-value of 2.01). However, experiencing the two-dimensional regime does not fully prevent a large majority from implementing their preferred rules changes.

Majority Homogeneity (dHOM) has a selective effect on rules changes. A more homogeneous majority party is more likely to implement pro-majority changes (coefficient of 2.2544 with z-value of 2.32). Heterogeneity of the majority party has less effect on promoting pro-minority changes (coefficient of -0.9267 with z-value of -0.98). Therefore, the second and the third hypothesis are confirmed.

Figure 2.3 provides a more vivid depiction of how certain variables influence rules changes. The first plot shows the probability of having two types of rules changes when

²³For the completeness of argument, I have also employed the ordered logit model with the same explanatory variables here, and then tested the PR assumption of the model (results omitted here). As expected, all three key variables do not appear to fully satisfy the PR assumption.

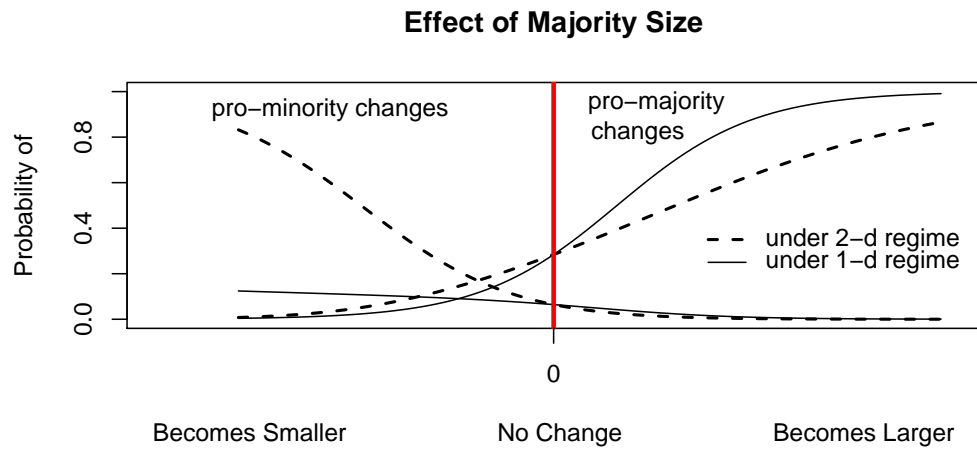
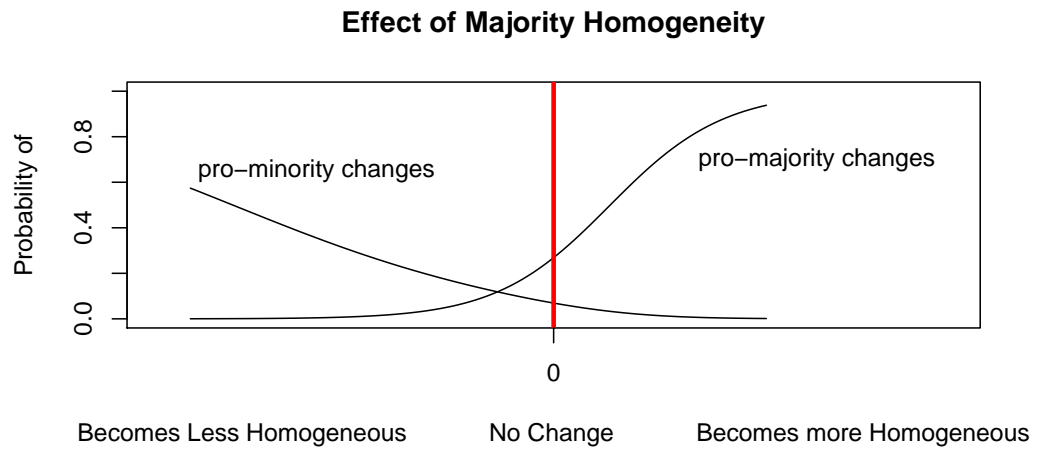


Figure 2.3: Predicted Probabilities of Two Types of Rules Changes

Majority Homogeneity (dHOM) varies from its observed minimum to its observed maximum, holding other variables at their means. Starting from 0 on the horizontal axis,²⁴ the movement to the *right* direction significantly increases the probability of having a pro-majority change. On the other hand, the movement to the *left* direction somewhat increases the probability of having pro-minority changes even though the probability itself does not fully reach to the level over 0.6.

The second plot shows the probabilities of having two types of rules changes when Majority Size (dMAJPCT) varies from its observed minimum to its observed maximum, holding other variables at their means (except for 2DIM). The predicted probabilities under the two different dimensional regimes are shown in different lines: solid line for the one-dimensional regime and dotted line for the two-dimensional regime.

Starting from 0 on the horizontal axis, the movement to the *right* direction notably increases the probability of having a pro-majority change (almost unconditional on dimensional regime types). The effect under the two-dimensional regime looks linear while the effect under the one-dimensional regime looks more imminent. More interestingly, the movement to the *left* direction produces a distinct pattern. A smaller majority significantly increases the probability of having pro-minority changes under the two-dimensional regime, whereas it has almost no effect under the one-dimensional regime.

2.5 Conclusion

By finding a more appropriate statistical model and a more reasonable set of explanatory variables, I find rules changes in the House to be conditional in nature. Different combinations of political factors are required for the two different types of rules changes. As

²⁴This is because the explanatory variables of interest are difference measures. The exactly same explanation holds for the other graph on the bottom.

for pro-majority changes, the size and the homogeneity of the majority party are the main factors, whereas the size of the majority party and the dimensionality of policy space are the main factors for pro-minority changes.

To put it differently, two partisan forces selectively influence rules changes. First, the majority size matters in combination with dimensionality. Pro-minority changes are more likely when the majority party becomes smaller, especially under the two-dimensional regime. Pro-majority changes are more likely when the majority party becomes larger, regardless of dimensional regime types. Second, the majority homogeneity has a mixed effect. Pro-majority changes are more likely when the majority party becomes more homogeneous. Pro-minority changes have little systematic relationship with heterogeneity of the majority party.

This finding consequently questions the role of floor median in rules changes. As nicely summarized by the term “ideological power balance,” the floor median has been considered as a key player in the House to balance the power between the majority and the minority parties: “the median voter on the floor has been free to unite with members of either party to enact new rules” (Schickler 2000, 283). To the contrary, the finding in this chapter strongly suggest that the power of floor median is very much dependent on both *partisan* factors and policy *dimensions*.

It looks *as if* the floor median’s move *drove* a certain rule change. However, what really happens could be that some partisan factors affect *both* the movement of floor median *and* the change in House rules *at the same time*. Then, it would be more appropriate to say that rules changes in the House are driven by several partisan forces, not by the floor median. Moreover, an explicit role of dimensionality in rules changes seriously undermines the role of floor median, especially for pro-minority changes.

While this paper is successful in discovering the conditional nature of rules changes, it also suffers from some limitations. I do not include rules changes in the party caucus for the

analysis while they could significantly affect congressional organizations and congressional politics. Moreover, I do not consider the magnitude of rules changes even though some changes could be more important than others. I leave these for future research.

2.6 Technical Appendix

2.6.1 Statistical Comparison of Models

There are three statistical criteria in order to compare logit vs. ordered logit vs. multinomial logit models. They include: 1) the parallel regression (PR) assumption for the ordered logit model; 2) the independence of irrelevant alternatives (IIA) assumption for the multinomial logit model; and 3) the percent of correctly predicted outcomes for each model (i.e. how well the models recover the data).

First, consider the parallel regression (PR) assumption for the ordered logit model. The ordered logit model has one implicit assumption: the coefficients should be the same when we compare binary cumulations. Formally speaking, it assumes:

$$\frac{\partial \Pr(y \leq -1|\mathbf{x})}{\partial \mathbf{x}} = \frac{\partial \Pr(y \leq 0|\mathbf{x})}{\partial \mathbf{x}} = \frac{\partial \Pr(y \leq 1|\mathbf{x})}{\partial \mathbf{x}}$$

where y is outcome variable and \mathbf{x} is a vector of explanatory variables.

If this assumption is violated, we cannot use the ordered model and we must consider alternative models - multinomial models (Long 1997). The easiest way to test the PR assumption is to run multiple cumulative logit models, and check whether the coefficients for each explanatory variable are identical by using the Wald test. The Wald statistic is constructed by

$$\mathbf{W}_{PR} = (\mathbf{R}\hat{\boldsymbol{\beta}}_R - \hat{\boldsymbol{\beta}}_F^*)' \left[\mathbf{R}\widehat{\text{VAR}}(\hat{\boldsymbol{\beta}}_R)\mathbf{R}' \right]^{-1} (\mathbf{R}\hat{\boldsymbol{\beta}}_R - \hat{\boldsymbol{\beta}}_F^*) \sim^a \chi_{df}^2$$

where \mathbf{R} is a matrix indicating the restriction, $\hat{\boldsymbol{\beta}}_R$ is a vector of coefficients from the cumulative logit model, $\hat{\boldsymbol{\beta}}_F^*$ is a vector of coefficients from the ordered logit model, $\widehat{\text{VAR}}(\hat{\boldsymbol{\beta}}_R)$ is a variance-covariance matrix from the cumulative logit model.

Table 2.5: Comparison of Models

(a) Test of Parallel Regression Assumption

Variables	Coefficients from j-1 binary regressions		Wald Test		
	$y \leq -1$	$y \leq 0$	χ^2	$p > \chi^2$	df
Floor Median: dMED	12.8641	1.2445	4.59	0.032	1
Partisan Capacity: dCAPT	0.1371	0.8754	1.62	0.203	1
Republican Majority: MAJ	-0.8266	-1.2261	0.12	0.732	1
constant	3.5963	-0.4739			

Note: This result is based on Model 3 in Table 2.2 (b).

(b) Test of Independence of Irrelevant Alternatives

	Pro-minority changes			Pro-majority changes		
	Coefficient			Coefficient		
	full mlogit	pro-maj excluded	difference	full mlogit	pro-min excluded	difference
Floor Median: dMED	-12.5724	-11.6590	0.9134	0.2643	0.8802	0.6159
Partisan Capacity: dCAPT	-0.0049	-0.0397	0.0348	0.8696	0.8312	0.0384
Republican Majority: MAJ	0.6616	0.5638	0.0978	-1.1372	-1.2189	0.0817
constant	-3.1358	-3.0497	0.0861	-0.3727	-0.3540	0.0187
Hausman test	$\chi^2(6) = 0.046$			$\chi^2(6) = -0.410^\dagger$		
	Prob > $\chi^2 = 0.9999$			Prob > $\chi^2 = 0.9999$		

Note: This result is based on Model 5 in Table 2.2 (c). [†]According to Long (1997), Hausman and McFadden examined negative values, and concluded that a negative value is evidence that IIA holds.

(c-1) Percent Correctly Predicted - Logit vs. Multinomial Logit

	Pro-minority changes		Pro-minority changes	
	logit [†]	mlogit ^{†††}	logit ^{††}	mlogit ^{†††}
Numbers correctly predicted	57	61	50	51
Percent correctly predicted	86.36	92.42	75.76	77.27
Percent reduction of errors	44.44		6.25	

Note: [†]Based on Model 1 in Table 2.2 (a). ^{††}Based on Model 2 in Table 2.2 (a). ^{†††}Based on Model 5 in Table 2.2 (c).

(c-2) Percent Correctly Predicted - Ordered Logit vs. Multinomial Logit

	ologit [†]	mlogit ^{††}
Numbers correctly predicted	41	45
Percent correctly predicted	62.12	68.18
Percent reduction of errors	16.00	

Note: [†]Based on Model 3 in Table 2.2 (b). ^{††}Based on Model 5 in Table 2.2 (c).

Table 2.5 (a) shows the result from binary cumulations based on Model 3 in Table 2.2 (b) (Schickler's ordered logit). Notably, the two most important explanatory variables do not seem to fully satisfy the PR assumption. The two coefficients for Floor Median (dMED) are very different from each other (12.8641 vs. 1.2445), producing the Wald statistic of 4.59 ($p = 0.03$). The two coefficients for Partisan Capacity (dCAPT) are substantively different (0.1371 vs. 0.8754) even though statistically indistinguishable (Wald statistic of 1.62 with $p = 0.20$).

Secondly, we can test the assumption of Independence of Irrelevant Alternatives (IIA) for the multinomial logit model. The IIA assumption simply means that the odds (the probability of having one alternative as opposed to another alternative) are determined without reference to other outcomes that might be available²⁵. So, IIA requires that if a new alternative becomes available, then all probabilities for outcomes should adjust so that the original odds among all pairs of outcomes remain the same. If we see this in a different angle, the IIA assumption also requires that omitting one alternative should not affect the values of coefficients. Formally speaking, it is:

$$\frac{\Pr(y = m|\mathbf{x})}{\Pr(y = n|\mathbf{x})} \bigg|_{\mathbf{Y}} = \frac{\Pr(y = m|\mathbf{x})}{\Pr(y = n|\mathbf{x})} \bigg|_{\mathbf{Y}-\{l\}}, \forall \text{ distinct } m, n, l \in \mathbf{Y}$$

where $m, n, l \in \mathbf{Y}$ are three-category outcomes.

If this assumption is violated, we cannot use the multinomial logit model and we must consider alternative models - such as a multinomial probit (Long 1997)²⁶. The most com-

²⁵It is important to note that this statement is a conditional statement (i.e. conditional on \mathbf{x}). Since the outcome variable y is modeled by a set of explanatory variables (\mathbf{x}), the technical meaning of this statement might not be exactly the same as written here.

²⁶In this sense, the IIA assumption is for multinomial *logit* models, not multinomial models in general. And, it is also important to note that even the failure of the IIA assumption does NOT indicate that we have to use the *ordered* logit model. Just in case, I've also run the multinomial probit model (in a Bayesian framework with uniform priors). And, the result is very similar to Table 2.2 (c).

only used method to test the IIA assumption is the Hausman test. We need to first run multiple binary/multinomial logit models where one or more outcome categories are excluded. Then, the Hausman statistic can be used to check whether the coefficients for the restricted model are inconsistent with the coefficients for the full model. The Hausman statistic is constructed by

$$\mathbf{H}_{\text{IIA}} = (\hat{\beta}_R - \hat{\beta}_F^*)' \left[\widehat{\text{Var}}(\hat{\beta}_R) - \widehat{\text{Var}}(\hat{\beta}_F^*) \right]^{-1} (\hat{\beta}_R - \hat{\beta}_F^*) \sim^a \chi^2_{\# \text{rows in } \hat{\beta}_R}$$

where $\hat{\beta}_R$ is a vector of coefficients from the restricted binary/multinomial model, $\hat{\beta}_F^*$ is a vector of coefficients from the full multinomial model, and $\widehat{\text{Var}}(\hat{\beta}_R)$ and $\widehat{\text{Var}}(\hat{\beta}_F^*)$ are variance-covariance matrices from the restricted and the full multinomial model respectively.

Table 2.5 (b) shows the result from the restricted models based on Model 5 in Table 2.2 (c) (my multinomial logit model). Notably, there is no evidence that the IIA assumption is violated: Hausman tests for both alternatives produces the p-values of almost 1.0 ($p = 0.9999$)²⁷.

Thirdly, a comparison of “the percent of outcomes correctly predicted” is another way to compare models. This is a concept of how well a constructed statistical model can generate observed data based on its estimated result. If one model is found to generate the data more accurately than another model, then the data is considered to have a “better fit” to the first model. I conduct two comparisons: Binder’s two logits versus my multinomial logit, and Schickler’s ordered logit versus my multinomial logit.

To compare my model to Binder’s model, the predicted values are calculated as:

²⁷Of course, failure to reject the null of IIA using the Hausman test does not necessarily mean that IIA holds in a statistical sense. However, the similarity between my multinomial logit result and an alternative multinomial probit result weakly suggests that the IIA assumption is satisfied at least in a substantive sense.

- Logit (Binder)

$$\begin{aligned}\text{Pro-minority predicted} &= \begin{cases} 1 & \text{if } \Pr(y_i = -1 \mid \text{pro-minority model}) > 0.5 \\ 0 & \text{otherwise} \end{cases} \\ \text{Pro-majority predicted} &= \begin{cases} 1 & \text{if } \Pr(y_i = 1 \mid \text{pro-majority model}) > 0.5 \\ 0 & \text{otherwise} \end{cases}\end{aligned}$$

- My multinomial logit

$$\begin{aligned}\text{Pro-minority predicted} &= \begin{cases} 1 & \text{if } \Pr(y_i = -1) \text{ is the largest} \\ 0 & \text{otherwise} \end{cases} \\ \text{Pro-majority predicted} &= \begin{cases} 1 & \text{if } \Pr(y_i = 1) \text{ is the largest} \\ 0 & \text{otherwise} \end{cases}\end{aligned}$$

And, in order to compare my model to Schickler's model, the predicted values are calculated as:

- Ordered logit (Schickler)

$$\text{Predicted} = \begin{cases} -1 & \text{if } \Pr(y_i = -1) \text{ is the largest} \\ 1 & \text{if } \Pr(y_i = 1) \text{ is the largest} \\ 0 & \text{otherwise} \end{cases}$$

- My multinomial logit

$$\text{Predicted} = \begin{cases} -1 & \text{if } \Pr(y_i = -1) \text{ is the largest} \\ 1 & \text{if } \Pr(y_i = 1) \text{ is the largest} \\ 0 & \text{otherwise} \end{cases}$$

As Table 2.5 (c-1) indicates, the multinomial logit model predicts the outcome better than the binary logit model. My multinomial logit model correctly predicts 92.42% of pro-minority changes whereas Binder's logit model correctly predicts 86.36% of pro-minority changes. And, my multinomial logit model correctly predicts 77.27% of pro-majority changes while Binder's logit model correctly predicts 75.76% of pro-majority changes. So, the percent reduction of errors (PRE) in favor of my multinomial logit model (as compared to Binder's binary logit models) is 44.44% for pro-minority changes and 6.25% for pro-majority changes.

Similarly, Table 2.5 (c-2) shows that the multinomial logit model also predicts the outcome better than the ordered logit model. My multinomial logit model correctly predicts 68.18% of the rules changes while Schickler's ordered logit model correctly predicts 62.12% of the rules changes. So, percent reduction of errors (PRE) in favor of my multinomial logit model (as compared to Schickler's ordered logit model) is 16%. In sum, a multinomial logit model performs better than either logit or ordered logit models.

A more vivid way to see the appropriateness of my multinomial logit model is to examine the biased estimates produced by other models. In general, if an outcome variable is indeed ordinal and a multinomial model is used, then we have a loss of efficiency (while still having unbiasedness). However, if we have a nominal outcome variable and an ordered model is employed, then we have *biased* estimates (Long 1997)²⁸. Figure 2.4 shows how much biased Binder's and Schickler's estimates are as compared to my multinomial logit model when predicting the probability of having a certain type of rules change.

Figures 2.4 (a) and 2.4 (b) plot the probabilities of having pro-majority changes and pro-minority changes when Partisan Capacity varies from its observed minimum to its observed

²⁸Of course, the unbiasedness of estimates depends on multiple factors such as model choice, functional form, and all relevant covariates. So, if we follow a strict criteria, then every estimate is biased and useless. I am not making this extreme of an argument. Rather, even after assuming that all other factors are perfect, the wrong choice of an ordered logit produces biased estimates.

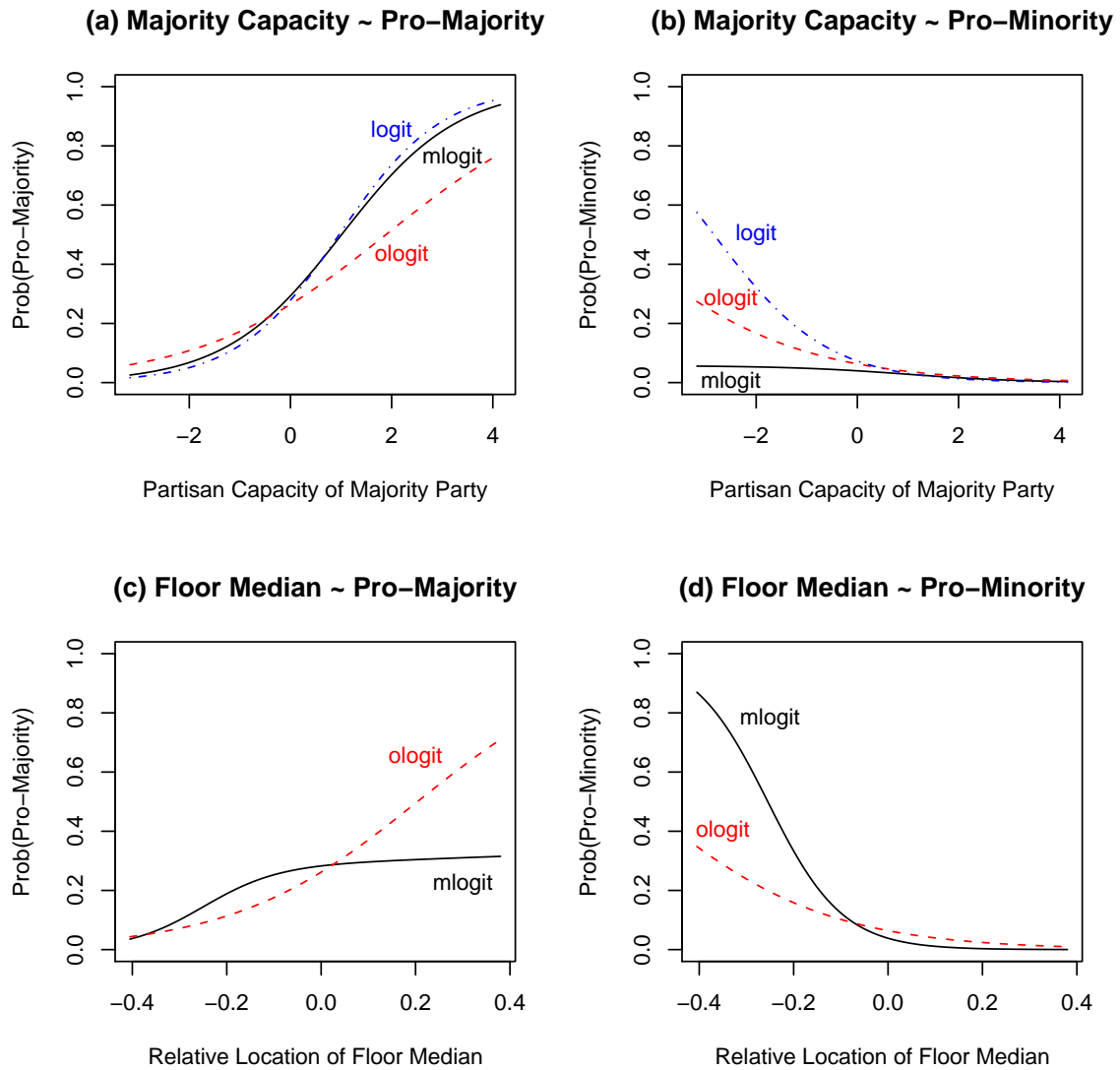


Figure 2.4: How Biased are Logit and Ordered Logit?

maximum, holding other variables at their means. In (a), the slope from the multinomial logit model is similar to that from the logit model and steeper than that from the ordered logit model. This suggests that the effect of Partisan Capacity on pro-majority changes is *under-estimated* in the ordered logit model. On the other hand, in (b), the slope from the multinomial logit model is much less steep than that from the logit model and that from the ordered logit model. This suggests that both logit and ordered logit models *over-estimate* the effect of Partisan Capacity on pro-minority changes.

Figures 2.4 (c) and 2.4 (d) plot the probabilities of having pro-majority changes and pro-minority changes when Floor Median varies from its observed minimum to its observed maximum, holding other variables at their means. In (c), the slope from the ordered logit model is much steeper than that from the multinomial model, indicating that the effect of Floor Median on pro-majority changes is *over-estimated* in the ordered logit model. On the other hand, in (d), the slope from the ordered logit model is less steep than that from the multinomial logit model, suggesting that the effect of Floor Median on pro-minority changes is *under-estimated* in the ordered logit model.

In sum, Binder's binary logit model over-estimates the effect of Partisan Capacity on pro-minority changes, but is fairly accurate for estimating the effect of Partisan Capacity on pro-majority changes. Schickler's ordered logit model under-estimates the effect of Partisan Capacity on pro-majority changes and the effect of Floor Median on pro-minority changes, while over-estimating the effect of Partisan Capacity on pro-minority changes and the effect of Floor Median on pro-majority changes.

The methodological lesson is that, if there is any question about the ordinal nature of the outcome variable (especially in a theoretical sense), we need to give up efficiency in order to avoid potential bias. The fact that the values of the outcome variable *can* be ordered does not imply that the variable *should* be analyzed as ordered. Here, there is no theoretical evidence that the outcome variable is strictly ordered: the category of "no

Table 2.6: Partisan Capacity and Floor Median Variables

Outcome Variable	Model A1 [†]			Model A2 [†]		
	Partisan Capacity: dCAPT			Floor Median: dMED		
	Coefficient	Std.error	z-value	Coefficient	Std.error	z-value
Majority Homogeneity: dHOM	1.5504	0.1074	14.44	0.0775	0.0188	4.12
Majority Size: dMAJPCT	0.1547	0.0075	20.54	0.0172	0.0013	13.02
Republican Majority: MAJ	0.2395	0.1254	1.91	0.0143	0.0220	0.65
constant	-0.1023	0.0767	-1.34	0.0036	0.0134	-0.27
R^2	0.8929			0.7340		
Residual standard error	0.4752 on 62 df			0.0833 on 62 df		
F-statistic	172.4 on 3-62 df ($p < 0.01$)			57.02 on 3-62 df ($p < 0.01$)		

Note: [†]A simple OLS is employed.

change” contains only five neutral changes (7.56% of all cases and 14.51% of no change cases). More importantly, if we are interested in the conditions that affect pro-majority or pro-minority changes *as compared to no change*, it is safe to use the multinomial model. It is particularly so here, given that Schickler’s ordered logit violates the PR assumption and my multinomial logit does not violate the IIA assumption.

2.6.2 Partisan Capacity and Floor Median Variables

Table 2.6 shows how well the two partisan sub-factors - Majority Size (dMAJPCT) and Majority Homogeneity (dHOM) - explain both Partisan Capacity (dCAPT) and Floor Median (dMED). Observe the very high R^2 values for both models. This makes sense in that we have an extremely high level of correlation between Partisan Capacity and Floor Median variables (0.72).

Methodologically speaking, the high correlation between Partisan Capacity and Floor Median variables is problematic because it causes a possible multicollinearity problem. When I replicated Schickler’s model and compared that with the alternative model, I intentionally included both variables in the same model. Since this level of multicollinearity still guarantees BLUE (Greene 2003; Cameron and Trivedi 2005), my previous discus-

sion about “change” and “bias” in coefficients still holds. However, we have a way to fix the multicollinearity by excluding both Partisan Capacity (dCAPT) and Floor Median (dMED) and by including both Majority Homogeneity (dHOM) and Majority Size (dMAJPCT) instead. This could serve for another reason why I choose an alternative list of explanatory variables in the paper.

2.6.3 MPRE

MPRE₁₂ refers to the marginal proportional reduction in errors from the 1-dimensional DW-NOMINATE model to the 2-dimensional DW-NOMINATE model. It is a measure to calculate the relative importance of the second dimension as compared to the first dimension. It was originally introduced by Poole and Rosenthal (1997), and was revised by Roberts, Smith and Haptonstahl (2008)²⁹. It is calculated as:

$$\begin{aligned} \text{MPRE}_{12} &\equiv \frac{\sum_{j=1}^q [\text{errors by 1-dimensional model} - \text{errors by 2-dimensional model}]_j}{\sum_{j=1}^q [\text{errors by 1-dimensional model}]_j} \\ &= \frac{(1 - \text{APRE}_1) - (1 - \text{APRE}_2)}{(1 - \text{APRE}_1)}, \end{aligned}$$

where $\text{APRE}_k \equiv \sum_{j=1}^q [\text{minority vote - classification errors}]_j \div \sum_{j=1}^q [\text{minority vote}]_j$, calculated for the k -dimensional model.

As shown in Figure 2.5, the period of 1909-1967 (blocked by the two vertical lines) is characterized by a higher level of MPRE’s. It increases from 0.15 to 0.30 in 1909, stays around there until 1968, and declines in subsequent periods. The period of cross-party coalitions was actually a two-dimensional regime.

²⁹Poole and Rowenthals’ original measure is $\text{APRE}_2 - \text{APRE}_1$. However, according to Roberts, Smith and Haptonstahl (2008), this actually measures how much the 2-dimensional model improves on the 0-dimensional model than the 1-dimensional model does. Therefore, MPRE₁₂ is an appropriate way to calculate the relative importance of the second dimension as compared to the first dimension.

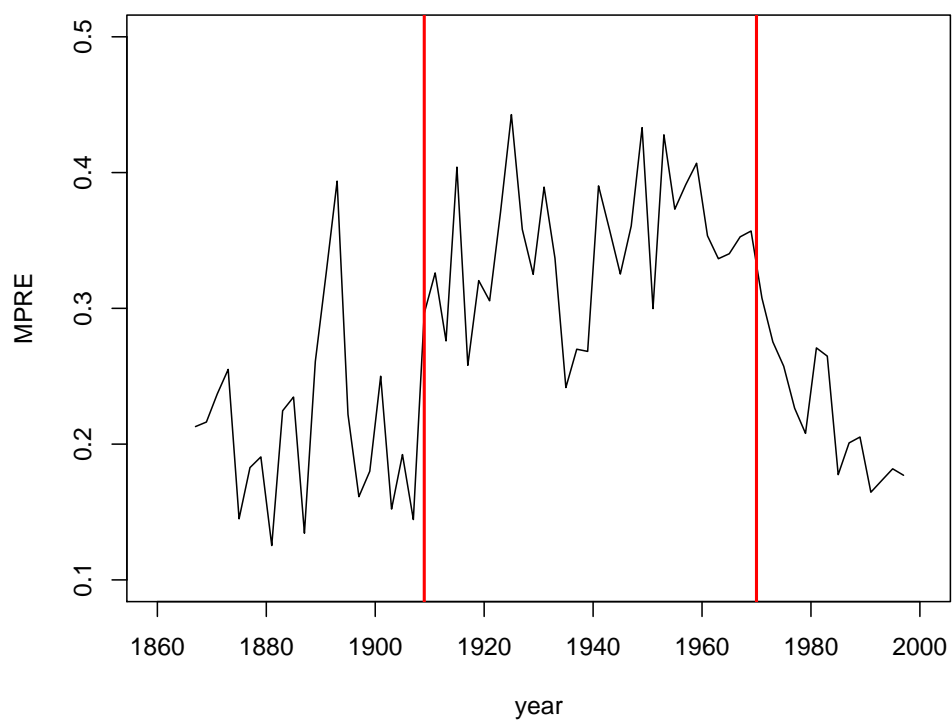


Figure 2.5: MPRE: Relative Importance of Second Dimension

Chapter 3

Minority Party Members on Committees

Political parties and standing committees are the two most important organizations in almost every national legislature in the world. Committees are the center of legislative and investigative activities, and are often interpreted as a tool to promote partisan goals. Political parties and their leaders try to influence committees by assigning members, regulating tasks, resources and committee personnel, reviewing committee decisions, and controlling access to the floor (Cox and McCubbins 1993). One thing that appears to prevent more complete control of committees is the presence of members of the other party.

Why would a generic parliament have committees with minority party members? In other words, why does the majority party tolerate minority party members on committees? In most parliamentary settings, if the majority party considers minority party committee members a burden, then it could choose to exclude minority party members entirely from the committee system. This, however, has rarely happened in history. What benefits do minority party members on committees provide *to the majority party on the floor*? This chapter provides one possible explanation to this question via a simple signaling game.

I argue that, in equilibrium, the majority party on the floor has an incentive to include minority party members on committees. Specifically, the majority party can extract *informational* benefits by having minority party members on committees. This is an informational rationale for the presence of minority party members on committees. Without relying on normative arguments or a repeated game framework, I show that the majority party can expect to be better off by having minority party members on committees.

After discussing the uniqueness of my approach to examine this ironic situation, I develop a signaling model game, where the majority party is the principal and committee delegations are the agents. Then, the chapter concludes by discussing theoretical extensions and possible applications.

3.1 How to Approach the Question

Some have just *assumed* that the majority party cannot exclude minority party members from the committee system. They usually justify this assumption with normative rationales, such as upholding democratic values, preserving institutional legitimacy, or defending minority rights. For example, minority party members and their constituents would feel much more “democratic” when they are included in the decision-making process. Supporters and voters for the minority party would have higher political efficacy when their representatives are actively participating in the policy-making process.

While these rationales are a very important part of the story, my approach differs in that I do not rely on normative motivations for political actors. Rather, I assume a high level of utilitarianism for all legislators, allowing each legislator to choose an option based on cost-benefit calculations. *If* the majority party came to the conclusion that it would be better off without minority party members on committees, and *if* it were actually able to implement that, then it should be able to choose an option of restricting minority party members from

the committee system. My model allows this type of decision by endogenizing the majority party's choice between a *majoritarian* or a *bipartisan* committee system.

My approach also differs from the logic of "repeated games." The goal here is to eliminate or reduce the social inefficiency observed in the equilibria of games such as the prisoner's dilemma game (Fudenberg and Maskin 1986; Calvert 1995). Under the repeated game, a player can be deterred from obtaining short-term gain by the threat of punishment that reduces long-term benefits. Applying the method here, for example, consider a hypothetical committee system which does not allow minority party members. The majority party knows it might lose majority status in some future election, after which it could reasonably be concerned with being excluded from the committee system. In this case, perhaps it is regular elections that prevent the current majority party from employing such an extreme, even "nuclear" option.

On the other hand, I seek a rationale that involves narrow self-interest not only in the long run but also in the short run. I model committee output as a signaling game with a structure that is widely used in contract theory (Laffont and Martimort 2002; Salanie 2005). Under the signaling game, certain information is known to one person but not to another. In order to overcome this informational asymmetry, the less-informed person (principal) hires the well-informed person (agent). Under the contract, the well-informed person provides the less-informed person with a useful tip regarding the information of interest. This tip is called a "signal." Since the two person's preferences are not identical, the signal itself might not be as trustworthy as one can naively imagine. Therefore, increasing the quality of the signal is the main goal for the less-informed person.

In my approach, committee delegations from both the majority and the minority party send signals while the majority party in the parent chamber receives them. There is no difference in cost for different signals, so my model is a "cheap talk" game. Even though

the signals are *cheap*, the majority party can be better off by having *two* signals from the committee rather than just *one*.

The basic components of the signaling game come from multiple sources. First, the idea of having two signals comes from Grossman and Helpman (2001). They explore the benefit of having multiple lobbyists with contrasting biases. Legislators can be better if they have two lobbyists with “opposite bias” than if they have either one lobbyist or two lobbyists with “like bias.” I apply this logic to the committee composition problem: the majority party may be better off if it has two committee delegations with “opposite bias.”

Secondly, most of the game settings that I use here benefit from a line of research on “rules” choices (Gilligan and Krehbiel 1987, 1989; Krishna and Morgan 2001). While they derive several equilibria that are my starting points, the research questions from this literature are fundamentally different from mine. They are interested in why a legislature adopts rules that limit amendments whereas I am interested in why the majority party wants minority party members in the committee system. However, as will be clear later, their game settings provide some clues about how I can address my own question.

While borrowing from prior literature, my model extends previous studies in two key ways: I endogenize the committee composition decision inside the game sequence, and I allow variations in the bias of minority party members in the committee. These two improvements actually are crucial when deriving my conclusion about the committee composition decision by the majority party on the floor.

There are several other distinctive features of my model that, though not necessary for deriving my conclusion, are worth mentioning. First, if we consider the model in a principal-agent framework, my principal is the *majority party* on the floor whereas my predecessors consider the *parent chamber* (as a whole) as principal. Second, my equilibrium is weakly preferred by each of the players in the game over my predecessors’ equilibria.

Third, the utility functions in my model are “absolute value” loss functions whereas those in my predecessors are quadratic loss functions.

3.2 Model

There are three players in the game: (1) C_{maj} denotes the majority party delegation to the committee; (2) C_{min} denotes the minority party delegation to the committee; and (3) L_{maj} denotes the majority party leadership representing the party caucus (or the majority party on the floor). Each is modeled as a unitary actor who cares about a unidimensional outcome $x \in X \subset \mathbb{R}$.¹ The ideal point of L_{maj} is set equal to 0 without loss of generality. The ideal point of C_{maj} is c (> 0) and that of C_{min} is $-rc$ ($r > 1$).² All players use absolute value loss functions to evaluate actual outcomes: for an outcome, x , (1) $U_{L_{\text{maj}}} = -|x|$; (2) $U_{C_{\text{maj}}} = -|c - x|$; and (3) $U_{C_{\text{min}}} = -|-rc - x|$.

The committee proposes a bill, $b \in P \subset \mathbb{R}$, and the floor then chooses a policy, $p \in P \subset \mathbb{R}$. The policy p results in an uncertain outcome, $x = p + \omega$, that depends on some underlying state of nature $\omega \in \mathbb{U}[0, 1]$. And, there is an exogenously given status quo policy, p_o ($-1 < p_o < 0$).

The sequence of the game is as follows:

1. L_{maj} chooses either Majoritarian Committee System (committee only with C_{maj}) or Bipartisan Committee System (committee with both C_{maj} and C_{min}).

¹I make the unidimensionality assumption not because I think the House is unidimensional as Poole and Rosenthal (1997) argue, but because the majority party leadership (L_{maj}) generally cares mostly about the liberal-conservative dimension.

² r represents the variance on C_{min} 's ideal point. This is actually an innovation in a modeling sense. More specifically, r is assumed to be greater than 1, which means that C_{min} is ideologically more distant from L_{maj} than C_{maj} is.

2. Nature reveals the state ω to C_{maj} and C_{min} , but not to L_{maj} .³
3. C_{maj} proposes a bill $b \in P$ and C_{min} makes a public speech $s \in [0, 1]$ about ω at the same time.
4. L_{maj} chooses a policy $p \in \{b, p_o\}$.⁴
5. Utility is realized to each player.

Since L_{maj} chooses how to construct the committee first, the entire game can be analyzed by focusing on two subgames separately: Bipartisan Committee System subgame versus Majoritarian Committee System subgame. Then, based on the expected utilities from each subgame's equilibrium, we can derive the conditions where L_{maj} chooses the Bipartisan Committee System (the system that the House has maintained).

A strategy $b(\omega)$ for C_{maj} specifies a bill to propose for each state of nature. A strategy $s(\omega)$ for C_{min} specifies a public speech given the observed state of nature. A strategy for L_{maj} , $p(b, s)$, specifies a feasible policy after observing $b(\omega)$ and $s(\omega)$. Finally, L_{maj} forms posterior beliefs $g(b, s)$ over the state space. For each subgame, strategies and beliefs

$$(b^*(\omega), s^*(\omega), p^*(b, s), g^*(b, s))$$

comprise a weak perfect Bayesian equilibrium (WPBE) if

1. L_{maj} selects $p^*(b, s)$ that maximizes expected payoffs given $g^*(b, s)$;
2. C_{maj} and C_{min} simultaneously choose $b^*(\omega)$ and $s^*(\omega)$, respectively, to maximize payoffs given $p^*(b, s)$; and

³This is a situation of information asymmetry. So, L_{maj} “hires” C_{maj} and C_{min} as its agents.

⁴This represents the closed rule. The open rule case is illustrated in the Technical Appendix.

3. the beliefs $g^*(b, s)$ are formed using Bayes's rule, wherever possible.⁵

In an intuitive sense, what I want to do is to specify a set of strategies for all players so that the majority party leadership (L_{maj}) can guarantee a better outcome under the Bipartisan Committee System as compared with the Majoritarian Committee System. In other words, under a certain specification of strategies, I show that the minority committee delegation (C_{min}) helps the majority party leadership (L_{maj}) enjoy a better outcome.

3.3 Equilibria

Subgame I: Majoritarian Committee System

In the first Majoritarian Committee System subgame, the wPBE is:

$$\begin{aligned}
 b^*(\omega) &= \begin{cases} -\omega + c & \text{if } \omega \leq -3c - p_o \\ 4c + p_o & \text{if } -3c - p_o < \omega < -c - p_o \\ p_o & \text{if } -c - p_o \leq \omega < c - p_o \\ -\omega + c & \text{if } \omega \geq c - p_o \end{cases} \\
 p^*(b) &= \begin{cases} p_o & \text{if } b \in (p_o, 4c + p_o) \\ b & \text{otherwise} \end{cases} \\
 g^*(b) &= \begin{cases} -p_o & \text{if } b \in (p_o, 4c + p_o) \\ \mathbb{U}[-3c - p_o, -c - p_o] & \text{if } b = 4c + p_o \\ \mathbb{U}[-c - p_o, c - p_o] & \text{if } b = p_o \\ c - b & \text{otherwise} \end{cases}
 \end{aligned}$$

and $EU_{L_{\text{maj}}}(\text{Majoritarian Subgame}) = -c$

⁵I do not consider beliefs off the equilibrium path, hence the solution concept is “weak” PBE.

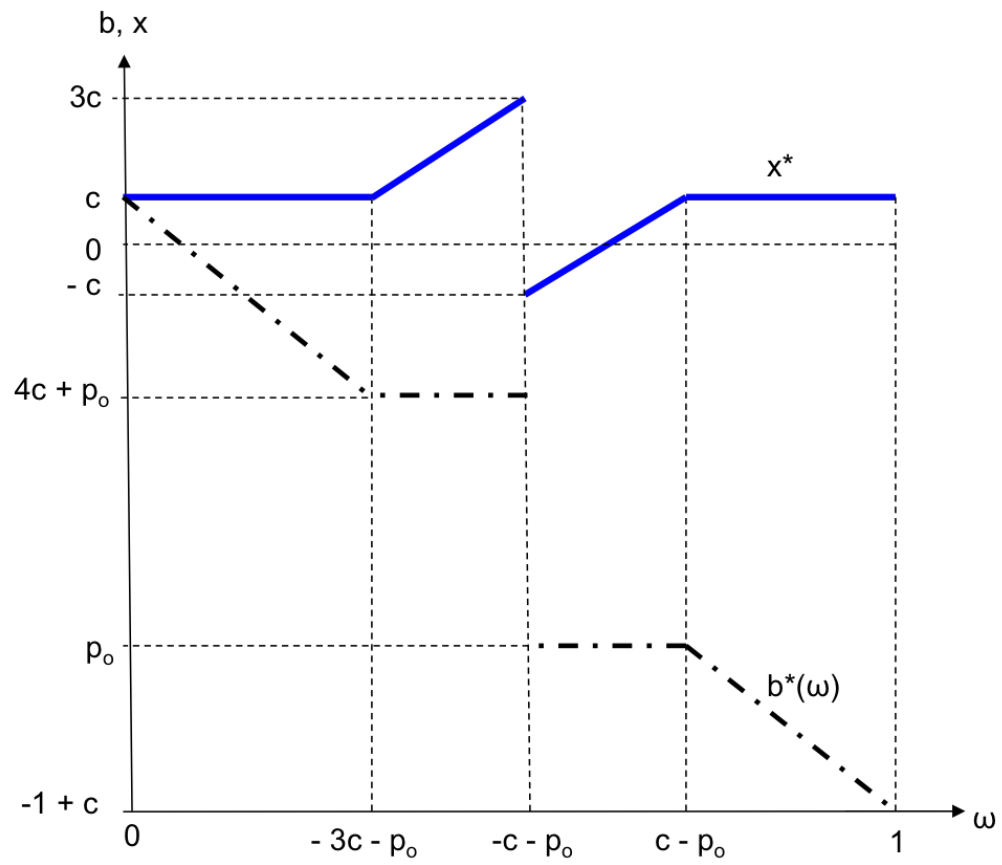


Figure 3.1: wPBE of Majoritarian Committee System subgame

Figure 3.1 illustrates the equilibrium result of this subgame. The horizontal axis represents the level of uncertainty, ω . The vertical axis represents the proposed policy, $b(\omega)$, and the realized policy outcome, x . The dotted line of $b^*(\omega)$ is the equilibrium bill proposal by C_{maj} and the solid line of x^* is the equilibrium outcome. For example, if C_{maj} observes an ω value, say $(-3c - p_o)$, then she proposes a bill of $(4c + p_o)$. Consequently, the policy is realized as c . Note also that c is C_{maj} 's ideal point and 0 is L_{maj} 's ideal point.

First, with only C_{maj} on the committee, L_{maj} should, in equilibrium, always defer to the committee proposal due to the lack of information. Consequently, the final outcome is a little away from L_{maj} 's ideal point (0) and C_{maj} can enjoy a situation, from time to time, under which its ideal point (c) is a final policy consequence. As we will see shortly, this is not the case if the committee is composed of both C_{maj} and C_{min} .

Second, in the perspective of L_{maj} , it can have more preferable policy outcomes if it allocates C_{maj} with *smaller* c . When I set up the model, the location of C_{maj} is exogenously given. However, if L_{maj} , for some reasons, is able to control this exogenously-given location,⁶ then L_{maj} can expect more favorable policy outcomes. In other words, the majority party leadership can control the committee activities by having members who are ideologically similar to the party leadership (or the party caucus). In order for future comparison, I would like to call this “direct” control: the majority party leadership controls the committees by *directly* controlling the membership of the committee delegations.

Subgame II: Bipartisan Committee System

In this subgame, C_{maj} and C_{min} simultaneously choose a bill b and a speech s , respectively. Then, based on b and s , L_{maj} chooses a policy $p \in \{b, p_o\}$. Before describing the equilibrium result, I borrow the concept of “agree/disagree” from Krishna and Morgan (2001).

⁶This is usually done through the committee assignment process.

Given a bill b and a speech s , the two committee delegations are said to *agree* if there exists an ω such that $b = b^*(\omega)$ and $s \subseteq s^*(\omega)$. If there is no such ω , then the committee delegations are said to *disagree*. Another way to think about “agree/disagree” is as “consistent/inconsistent” (with each other). When L_{maj} observes b , it can construct a set of possible ω values. Based on this set of possible ω values, L_{maj} can think of a set of possible s values. If the observed s value is one of the hypothetically constructed s values, then L_{maj} would consider that b and s are consistent, or that C_{maj} and C_{min} agree.

In the second Bipartisan Committee System subgame, the wPBE is:⁷

$$b^*(\omega) = \begin{cases} -\omega & \text{if } \omega \leq -2rc - p_o \\ -2\omega - 2rc - p_o & \text{if } -2rc - p_o < \omega \leq -rc - p_o \\ p_o & \text{if } -rc - p_o < \omega \leq c - p_o \\ -2\omega + 2c - p_o & \text{if } c - p_o < \omega \leq 2c - p_o \\ -\omega & \text{if } \omega > 2c - p_o \end{cases}$$

$$s^*(\omega) = -b^*(\omega)$$

$$p^*(b, s) = \begin{cases} b & \text{if } C_{\text{maj}} \text{ and } C_{\text{min}} \text{ agree} \\ p_o & \text{otherwise} \end{cases}$$

$$g^*(b, s) = \begin{cases} -b & \text{if } C_{\text{maj}} \text{ and } C_{\text{min}} \text{ agree} \\ -p_o & \text{otherwise} \end{cases}$$

$$\text{and } EU_{L_{\text{maj}}}(\text{Bipartisan Subgame}) = -r^2c^2 - c^2$$

⁷It is very important to note that the expression $s^*(\omega) = -b^*(\omega)$ does *not* mean C_{min} follows C_{maj} 's strategy. C_{maj} and C_{min} choose their strategies simultaneously. This expression only means that, in equilibrium, two players' strategies have this relationship.

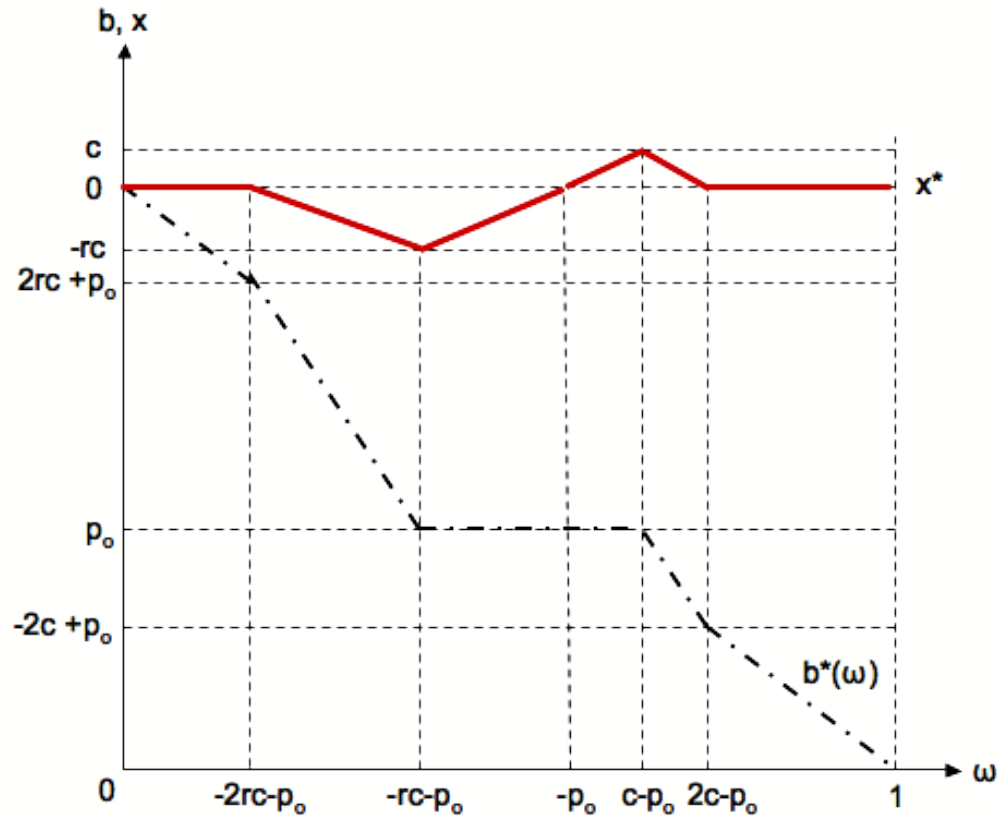


Figure 3.2: wPBE of Bipartisan Committee System subgame

Figure 3.2 illustrates an equilibrium for the Bipartisan Committee System subgame. As in the previous subgame, the figure shows the equilibrium bill proposal $b^*(\omega)$ (dotted line) and its outcome x^* (solid line), depending on the level of uncertainty.

Similar to the Majoritarian Committee System subgame, L_{maj} always defers to the committee in equilibrium due to the lack of information. However, the policy consequences do not please the bill proposer (C_{maj}) as much as in the Majoritarian Committee System subgame. L_{maj} can achieve its own ideal outcome (0) when $\omega \in (0, -2rc - p_o) \cup (2c - p_o, 1)$. This could not have happened were it not for the presence of C_{min} . If we use the language of the principal-agent framework, the principal (L_{maj}) could extract more valuable information from the “primary” agent (C_{maj}) with the help of the “secondary” agent (C_{min}).

In other regions, final policy consequences please C_{min} more than others when $\omega \in (-2rc - p_o, -p_o)$ and please C_{maj} more than others when $\omega \in (-p_o, 2c - p_o)$. These \vee -shaped and \wedge -shaped regions are required in order to make C_{min} and C_{maj} indifferent from the status quo, respectively. This can be thought of as a price to pay for two things: (1) delegating a bill proposal authority to C_{maj} in order to overcome the informational asymmetry; and (2) utilizing the presence of C_{min} in order to more fully control C_{maj} .

In this subgame, L_{maj} does *not* explicitly change the ideal point of C_{maj} . However, I show that, with some help of C_{min} , L_{maj} can *induce* C_{maj} to change their bill proposal in favor of L_{maj} . This happens because, in addition to the bill proposal by C_{maj} , L_{maj} allows C_{min} to speak about the policy uncertainty. In essence, L_{maj} employs a strategy profile under which L_{maj} passes the committee proposal only when the two signals from the committee (the bill proposal and the speech) point to the same thing, and reject it otherwise. This consequently forces C_{maj} to moderate the bill proposal in order to have C_{min} on board. In order to distinguish this mechanism from the previous one, I would like to call this “indirect” control: the majority party leadership controls their committee delegations indirectly

by allowing minority party members to signal.

When is the Bipartisan Committee System better?

Since we have the wPBE results from the two subgames, we can move on to the initial sequence of the entire game. Here, L_{maj} has to choose either to construct the Majoritarian Committee System with only C_{maj} or to construct the Bipartisan Committee System with both C_{maj} and C_{min} .

PROPOSITION. *At the first stage of the game (committee construction stage), in order for L_{maj} to have (or prefer) the Bipartisan Committee System instead of the Majoritarian Committee System, the condition $1 \leq r \leq \sqrt{\frac{1-c}{c}}$ should hold.*

Figure 3.3 compares wPBE's from the two subgames. The proposition can be easily derived by comparing the expected utilities from each subgame. The proposition has two implications. First, if L_{maj} has no option but to choose the Bipartisan Committee System instead of the Majoritarian Committee System, or if it is inclined to have indirect controls rather than direct controls, then it must (1) have C_{maj} who satisfies the condition in the proposition, and (2) make use of C_{min} 's signal in order to control C_{maj} . To put it differently, if the above condition holds, the majority party leadership can profitably utilize the indirect control mechanism.

Second, we can derive a *quasi negative* relationship between c and r . As r becomes smaller, the possible range that c can have becomes larger. As r becomes larger, the possible range of c becomes smaller. In other words, if the minority party delegation on the committee are ideologically distant from the majority party's party caucus, the majority party leadership should assign members from their own party who are ideologically very similar to the party caucus. If the minority party delegation on the committee is instead ide-

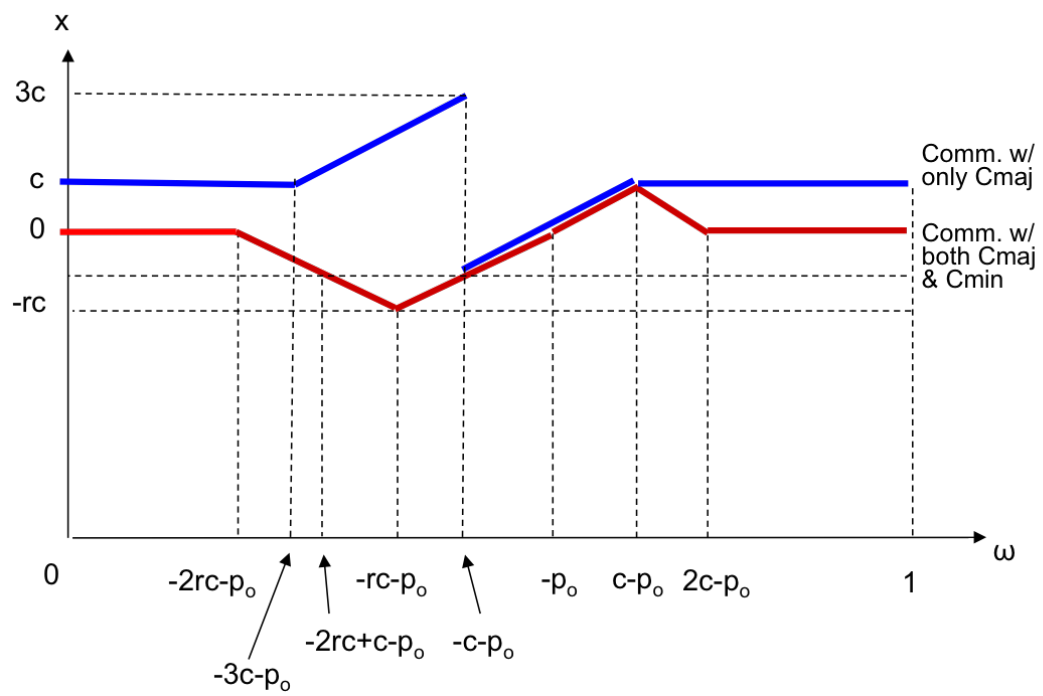


Figure 3.3: Policy Outcomes from Equilibriums of Signaling Game

ologically close to the majority party's party caucus, then the majority party leadership can allow the existence of ideologically dissimilar members on the committee assigned from their own party.

3.4 Discussion

By using a signaling model, I show that the majority party has an incentive to include minority party members on committees. This contrasts with my initial supposition that minority members on committees might be a burden to the majority party. Although the minority party delegation does not have any bill proposal power in my model, it constrains the majority party delegation in a way that serves the majority party in general. This effect stems from the fact that the minority party delegation makes a public speech about the state of nature. This provides an informational rationale for why the majority party chooses to have minority party members on committees.

Therefore, it is possible to say that my approach is a combination of the partisan perspective of Cox and McCubbins (1993) and the informational perspective of Krehbiel (1991). I adopt the partisan perspective because my primary concern is the relationship between the majority party leadership and the majority party committee delegations. I also adopt the informational perspective because committees are supposed to provide an expertise on policies so my focus is on the informational role of minority party committee delegations.

A better way to understand the implications of the model is to consider possible extensions. Such possibilities include examining the role of medians (both floor and committee medians), the role of status quo locations, and additional signaling activities within the majority party.

Role of Medians

Committee proposals require votes in the full committee. As such, the pivotal player could be the committee median, not the majority party committee delegation. My signaling model, however, does not include the committee voting stage after the committee proposal (by the majority). The question is whether the substantive conclusion will be different if we consider this element. In short, not likely.

When there is sincere voting on the committee, the bill proposal should reflect the committee median. It is up to the majority party leadership to decide whether or not it allows public “speech” by some members in the committee. Consider three cases: (1) the committee median is the only player - no additional activity; (2) in addition to the committee median, either the majority party or the minority party delegation is allowed to make a public speech about the state of nature; and (3) along with the committee median, both the majority party and the minority party delegations are allowed a public speech.

First, if the majority party leadership does not allow any “speech” other than the bill proposal (by the committee median), then the equilibrium result would be very similar to my Majoritarian Committee System subgame, except that the point, c , will change to wherever the committee median is located. The implication from this new game’s equilibrium is similar. The majority party leadership should rely fully on the committee median, and it has a burden to control the committee median directly. Or, it needs to allow public speech by someone else on the committee.

Second, the majority party leadership allows one speech from either party’s committee delegation. Here, the equilibrium result will be biased toward the member who makes a speech. If the speech is from the same side of the committee median, then this speech does not help the majority party leadership. On the other hand, if the speech is from the opposite side of the committee median, then the speech can help the majority party leadership to enjoy more favorable outcomes.

Third, the majority party leadership allows speeches from both parties' committee delegations. Then, the equilibrium becomes similar to my Bipartisan Committee System subgame. With the two additional signals, the majority party leadership can be better off.

The bottom line is that the majority party leadership needs at least one additional signal from the committee. Unless the committee median and the majority delegation are located on opposite sides, the majority party leadership would like to have the minority party delegation on the committee. In that way, the leadership can enjoy the benefit that my signaling model demonstrates.

Another consideration is the median on the floor. Of course, the floor median would also prefer the minority representation in committees because the floor median is more likely to be located between the two parties' medians. However, my signaling model considers a possibly extreme situation where the majority party dictates everything on the floor. Even under this extremely majoritarian system, I argue that the majority party leadership has an incentive to have minority party members on committees.

Signaling Within Majority Party

It is obvious that multiple signals from opposite directions are good. But, what if the majority party leadership receives one signal from the mainstream committee member and another signal from the moderate committee member?⁸ Because both of them are from the same party, the leadership can easily control them. In short, this could be a very reasonable extension of my signaling logic to a slightly different substantive problem.

We can consider a possible game in which a mainstream committee member proposes a bill, and a moderate committee member makes a public speech about the policy uncertainty. Other components remain the same as before. The first subgame is the committee

⁸A moderate member is defined as one whose ideology is similar to minority party members.

system with only the mainstream member, and the second subgame is the one with both the mainstream and the moderate members. The wPBE of each subgame are very similar, except that the \vee -shaped region becomes narrower and the \wedge -shaped region becomes wider in Figure 3.2.⁹ Finally, the conclusion follows that the majority party leadership benefits from their moderate members' signals.

This is a very plausible story about the committee assignment process. From time to time, the majority party leadership has to confront two dilemmas: (1) how to effectively control extreme committee outliers within their own party, and (2) what to do with committee assignment requests made by moderate members. Having both outliers and moderate members together in the committee system could be a reasonable solution.

A potential problem would occur when there is no committee assignment request from the moderate side and all committee members are on the same side of the majority party leadership. Then, the leadership could be worse off: it needs another mechanism. On the other hand, the minority party members could be a safe choice for the membership of the opposite side (as compared to moderate members from their own party). In other words, the majority party leadership has an incentive to include minority party members in the committee system at least under certain conditions.

Role of Status Quo

My model currently assumes that the status quo (p_o) be negative and far away from 0. But, we can think of a situation where the status quo point approaches toward 0 (i.e., the ideal point of L_{maj}). Then, the \vee -shaped and the \wedge -shaped regions would become narrower. This is so because these two regions are to make C_{maj} and C_{min} indifferent from the status quo.

⁹The mainstream member would be a little more extreme than the party median on the committee, and the moderate member would be closer to the party leadership than the minority party member.

In one perspective, this scenario is good for the majority leadership (L_{maj}): the equilibrium outcome becomes more closer to its ideal point. However, in another perspective, it becomes less appealing for the majority leadership to have the minority party members on committees: the value of minority presence on committees depends on the location of status quo.

Applications

Although the signaling model itself is neither committee-specific nor time-specific, the real world story could depend on several factors. For example, my signaling model logic works better for some committees but not for others. Consider a situation where the majority party leadership wants a “direct” and “complete” control over the committees that oversee interests crucial to the party. The leadership is more likely to deliberately choose their committee delegations in a way that committee delegations are ideologically similar and partisanly loyal to the party caucus. It does not matter if there exist minority party members on the committee: it might not be the leadership’s interest to consider this factor. These committees would include Rules, Appropriations, Ways and Means, and Budget Committees in the U.S. House of Representatives.

Another consideration is that not all committees are entirely relevant to the interest of party and its leadership. For example, the Agriculture Committee does not always produce policy outcomes that the party leadership would care about. In other words, they are involved in multi-dimensional policy outcomes. Then, we might not be able to observe control activities at all. Therefore, my signaling model would work better for committees such as Foreign Affairs, Education and Labor, Judiciary, Banking, and others in the House.

Similarly, my signaling model would be more applicable for the “textbook Congress” period. Consider a situation where the chamber is very polarized between the majority and the minority parties. As we observe from time to time, the minority party could come up

with a strategy under which their party members simply object to whatever the majority does. This might occur for electoral considerations rather than policy purposes. If the electoral dimension is the primary paradigm for legislators, then my signaling model, which considers only policy motivations, would not work in a consistent way. Therefore, a less polarized period such as the mid-twentieth century would fit my signaling model better.

3.5 Conclusion

This chapter is a theoretical exercise to better understand the somewhat ironical situation: why does the majority party bother to have minority party members on committees? I set up a signaling model and provide an informational rationale. Minority party committee delegations induce majority party committee delegations to moderate their bill proposal so that the majority party leadership can enjoy a better policy outcome. Put differently, the majority party leadership does not have a strong incentive to eliminate the minority representation on committees.

The uniqueness of my approach is to focus only on short-term utilitarian perspective. I do not deny that normative considerations could be one of the most important factors. I simply want to add one more story in which even an extreme narrow self-interest does not preclude us from having our current system of bipartisan committees. An obvious next step for future research is to examine how this works in real parliamentary institutions.

3.6 Technical Appendix

3.6.1 Proof of Equilibria

Majoritarian Committee System subgame

Observe that the beliefs are consistent with Bayes's rule wherever possible. So, it suffices to show that, given beliefs, no player has an incentive to deviate from the equilibrium strategies. Recall that the policy space, X , is a line where the ideal point of L_{maj} is the origin. Depending on the location of the status quo, p_o , there are four cases.

(i) $p_o + \omega \leq -3c$ (i.e. $\omega \leq -3c - p_o$): In this case, the equilibrium strategies result in an outcome of c (the ideal outcome for C_{maj}). Since C_{maj} can get the best outcome from $b^*(\omega)$, it has no incentive to deviate. By the same token, since L_{maj} prefers $b^*(\omega)$ to p_o given its beliefs, it also has no incentive to deviate.

(ii) $-3c < p_o + \omega < -c$ (i.e. $-3c - p_o < \omega < -c - p_o$): In this case, the equilibrium strategies result in an outcome of $p_o + \omega + c$. Since C_{maj} prefers $b^*(\omega)$ to p_o , it has no incentive to deviate. On the other hand, given beliefs, L_{maj} would have the same expected payoff from deviating to p_o . So, L_{maj} doesn't have a strong incentive to deviate.

(iii) $-c \leq p_o + \omega < c$ (i.e. $-c - p_o \leq \omega < c - p_o$): In this case, the equilibrium strategies result in an outcome of $p_o + \omega$ (the status quo outcome). Since both L_{maj} and C_{maj} are indifferent between $b^*(\omega)$ and p_o , neither has a strong incentive to deviate.

(iv) $p_o + \omega \geq c$ (i.e. $\omega \geq c - p_o$): Same as in the case (i), the equilibrium strategies result in an outcome of c (the ideal outcome for C_{maj}). By the same reasoning, neither L_{maj} nor C_{maj} has an incentive to deviate.

Finally, using Figure 3.1, it is trivial to calculate the expected utility of L_{maj} from this subgame, which is $-c$. □

Bipartisan Committee System subgame

Observe that L_{maj} is always optimizing, given its beliefs, and that the beliefs are consistent with Bayes's rule along the equilibrium path. So, it suffices to show that both C_{maj} and C_{min} has no incentive to deviate from the equilibrium strategies. One thing to note is that the deviation by either player leads to $b \neq -s$, which ultimately results in the status quo outcome. With the same logic as in Majoritarian Committee System subgame, there are five cases depending on the location of the status quo, p_o .

(i) $p_o + \omega \leq -2rc$ (i.e. $\omega \leq -2rc - p_o$): In this case, the equilibrium strategies result in an outcome of 0 (the ideal outcome for L_{maj}). Since both C_{maj} and C_{min} prefer $b^*(\omega)$ to p_o , neither has an incentive to deviate.

(ii) $-2rc < p_o + \omega \leq -rc$ (i.e. $-2rc - p_o < \omega \leq -rc - p_o$): The equilibrium strategies result in an outcome of $-2rc - p_o - \omega$. Since C_{maj} prefers $b^*(\omega)$ to p_o , it has no incentive to deviate. And, since $b^*(\omega)$ satisfies the condition $(b + \omega) - (-rc) = (-rc) - (p_o + \omega)$, C_{min} is indifferent between $b^*(\omega)$ and p_o . So, it has no strong incentive to deviate.

(iii) $-rc < p_o + \omega \leq c$ (i.e. $-rc - p_o < \omega \leq c - p_o$): The equilibrium strategies result in an outcome of $p_o + \omega$ (the status quo outcome). So, both C_{maj} and C_{min} are indifferent between $b^*(\omega)$ and p_o , which means neither player has a strong incentive to deviate.

(iv) $c < p_o + \omega \leq 2c$ (i.e. $c - p_o < \omega \leq 2c - p_o$): The equilibrium strategies result in an outcome of $2c - p_o - \omega$. Since C_{min} prefers $b^*(\omega)$ to p_o , it has no incentive to deviate. And, since $b^*(\omega)$ satisfies the condition $(p_o + \omega) - c = c - (b + \omega)$, C_{maj} is indifferent between $b^*(\omega)$ and p_o . So C_{maj} has no strong incentive to deviate.

(v) $p_o + \omega > 2c$ (i.e. $\omega > 2c - p_o$): As in the case (i), the equilibrium strategies result in an outcome of 0 (the ideal outcome for L_{maj}). Since both C_{maj} and C_{min} prefer $b^*(\omega)$ to p_o , neither has an incentive to deviate.

Finally, using Figure 3.2, it is trivial to calculate the expected utility of L_{maj} from this subgame, which is $-(rc \times rc + c \times c) = -r^2c^2 - c^2$. \square

Proposition

When $EU_{L_{\text{maj}}}(\text{Bipartisan subgame}) \geq EU_{L_{\text{maj}}}(\text{Majoritarian subgame})$, the Bipartisan Committee System is preferable for L_{maj} to the Majoritarian Committee System. Since the expected utilities are $EU_{L_{\text{maj}}}(\text{Majoritarian subgame}) = -c$ and $EU_{L_{\text{maj}}}(\text{Bipartisan subgame}) = -r^2c^2 - c^2$, and since r is assumed be greater than 1, the condition $-c > -r^2c^2 - c^2$ should hold. This provides that the condition $1 \leq r \leq \sqrt{\frac{1-c}{c}}$ yields the wPBE of the Bipartisan Committee System subgame as the equilibrium outcome of the entire game. \square

3.6.2 Open Rule Game

The open rule case is simpler than the closed rule case: the Bipartisan Committee System (with both C_{maj} and C_{min}) is *always* better for the majority leadership (L_{maj}) than the Majoritarian Committee System (with only C_{maj}).

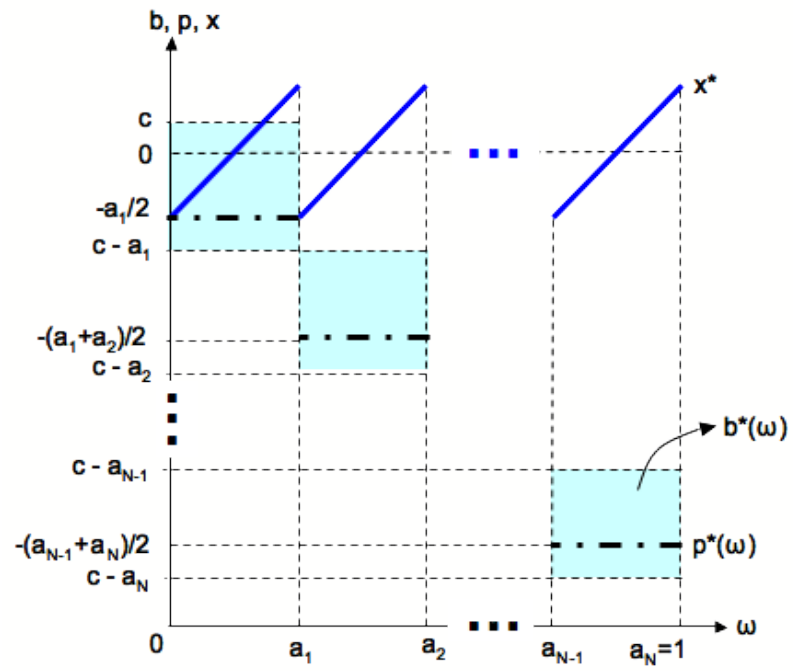
Majoritarian Committee System subgame

In this subgame, C_{maj} proposes b and L_{maj} chooses any policy $p \in P$ after observing b . Therefore the wPBE is:

$$b^*(\omega) \in [c - a_{i+1}, c + a_i] \quad \text{if } \omega \in [a_i, a_{i+1}]$$

$$p^*(b) = \begin{cases} -\frac{a_{N-1} + a_N}{2} & \text{if } b < c - 1 \\ -\frac{a_i + a_{i+1}}{2} & \text{if } b \in [c - a_{i+1}, c + a_i] \\ -\frac{a_0 + a_1}{2} & \text{if } b > c \end{cases}$$

(a) wPBE of Majoritarian subgame



(b) wPBE of Bipartisan subgame

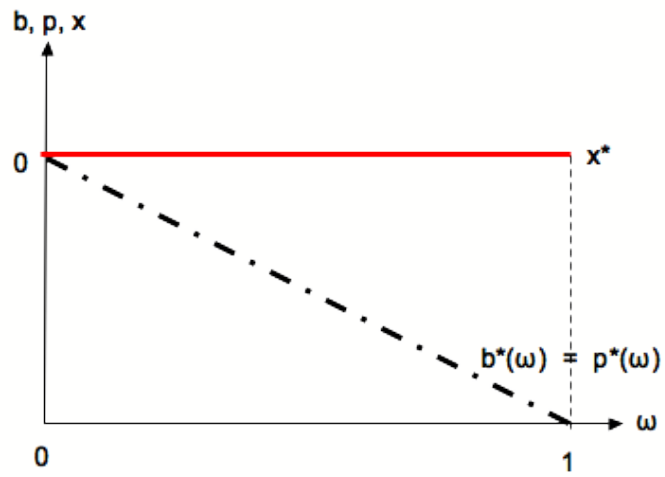


Figure 3.4: The Open Rule Game: Two Subgames

$$g^*(b) = \begin{cases} U[a_{N-1}, a_N] & \text{if } b < c - 1 \\ U[a_i, a_{i+1}] & \text{if } b \in [c - a_{i+1}, c + a_i] \\ U[a_0, a_1] & \text{if } b > c \end{cases}$$

where $a_0 = 0$, $a_i = a_1 i + 2i(1 - i)c$, $a_N = 1$, and N is the largest integer such that $|2N(1 - N)c| < 1$.

[PROOF] This is exactly Crawford and Sobel (1982)'s "information transmission" equilibrium. See (Gilligan and Krehbiel 1987, 309-312) for more details. Figure 3.4 (a) illustrates the equilibrium result of this subgame. \square

Bipartisan Committee System subgame

Here, C_{maj} and C_{min} simultaneously choose a bill b and a speech s , respectively. Then, based on the observed values of b and s , L_{maj} chooses any policy $p \in P$. The wpBE is:

$$\begin{aligned} b^*(\omega) &= -\omega \\ s^*(\omega) &= \begin{cases} -2rc & \text{if } \omega \leq 1 - 2rc \\ 2rc & \text{if } \omega > 1 - 2rc \end{cases} \\ p^*(b, s) &= \begin{cases} b & \text{if } C_{\text{maj}} \& C_{\text{min}} \text{ agree} \\ & \text{or if } C_{\text{maj}} \& C_{\text{min}} \text{ disagree and} \\ & b, b + s \in [-1, 0] \text{ and } U_{C_{\text{min}}}(s) > U_{C_{\text{min}}}(0) \\ b + s & \text{if } C_{\text{maj}} \& C_{\text{min}} \text{ disagree and} \\ & b, b + s \in [-1, 0] \text{ and } U_{C_{\text{min}}}(s) \leq U_{C_{\text{min}}}(0) \\ & \text{or if } C_{\text{maj}} \& C_{\text{min}} \text{ disagree and} \\ & b, b + s \notin [-1, 0] \\ p_o & \text{otherwise} \end{cases} \\ g^*(b, s) &= -p^*(b, s) \end{aligned}$$

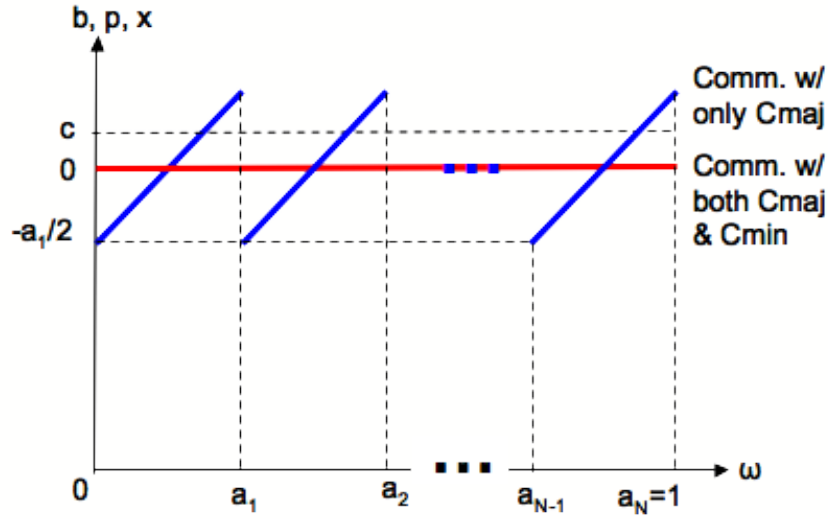


Figure 3.5: The Open Rule Game: Entire Game

[Proof] This is exactly Krishna and Morgan (2001)’s “heterogeneous committee” equilibrium under open rule. See (Krishna and Morgan 2001, 438-440, 448) for more details. Figure 3.4 (b) illustrates the equilibrium result of this subgame. \square

When is the Bipartisan Committee System better?

The expected utility from the Bipartisan Committee System subgame is larger than that from the Majoritarian Committee System subgame, because the former produces 0 expected utility, whereas the latter produces a clearly negative utility. Figure 3.5 demonstrates this visually. Therefore, in the open rule case, a bipartisan committee system is always preferred by the floor majority over a majoritarian committee system.

Chapter 4

Special Rules and Dimensionality

One of the most challenging moments while studying the American Congress is to observe the depth of disagreements in generalizing the same phenomenon. Several theories are competing, different methods are developing, and new data are emerging. All look like a fierce battlefield. However, in another sense, this is why we, as congressional scholars, are successfully accumulating knowledge, theories, and data.

Subjects such as political parties, special rules, and dimensionality all belong to this type of embattled subfield in American congressional politics. Each of the three topics has received rigorous attention for a long period of time, and has established a good record of scholarly works. However, the interactions in between are a little vague. While they are necessarily all inter-related, little attention has been explicitly given to these relationships.

This chapter, therefore, aims to build upon three groups of literature, and provides an answer for one particular research question. What are the determinants of dimensionality? In short, this paper is one of the first attempts to assess a variation in dimensionality for *individual* bills by paying special attention to the partisan use of *restrictive rules*.

I first derive predictions in conjunction with different perspectives of legislative organizations: distributive, informational, and partisan. Then, I conduct an empirical test on the relevance of each perspective in explaining the relationship between special rules and dimensionality. It turns out that the partisan perspective provides us with the most reasonable rationale with desirable evidence. The evidence suggests that political parties are intentionally reducing dimensionality of individual bills by using restrictive special rules with an expectation that this generates “easy” floor coalitions with a “clear” and “not-ugly” party brand name.

4.1 Perspectives on Dimensionality

Since the prominent work of Poole and Rosenthal (1997), congressional scholars have been treating - or, at least, assuming - policy space in Congress as unidimensional. Their logic is simple and powerful: it is difficult to make a substantial improvement in predictive power by adding more dimensions upon a simple liberal-conservative dimension. As such, most significant recent theoretical frameworks in congressional politics are based on this unidimensional world (Krehbiel 1998; Epstein and O’Halloran 1999; Cameron 2000; Howell 2003; Cox and McCubbins 2005).

However, going back to MacRae (1958) and Clausen (1973), there has always been a traditional approach that assumes a multidimensional policy space. Their logic is also very simple and powerful: congressional voting alignments vary as we move from one policy area to another. In addition, even within one policy area such as agriculture, a combination of different dimensional interests play an important role (Jones 1961; Hurwitz, Moiles and Rohde 2001).

Recently, there have been some very promising attempts to resolve this discrepancy between the unidimensional and the multidimensional characterizations of the congressional

policy space. For example, Crespin and Rohde (2007) examine all roll call votes on appropriations bills from the 100th through the 107th Congress. They first group all votes by 13 issue types, and then analyze voting patterns within each category. They find that some issues are multidimensional and that members do not always vote in a consistent way on all votes. According to them, the liberal-conservative dimension is present in almost all issue areas whereas other dimensions are too sparse across issues. Consequently, if aggregated to one Congress, such as in Poole and Rosenthal (1997), non liberal-conservative dimensions do not have enough roll call votes to reveal multidimensionality.

Roberts, Smith and Haptonstahl (2008) move a little further to examine the dimensionality by various levels of aggregation. By analyzing roll call votes for the 1955-1994 period, they first find that the dominance of the first liberal-conservative dimension varies over time and across issues: the importance of the first dimension increases over time, and votes on agriculture and civil rights issues do not align with votes on most other issues. Moreover, when the aggregation level becomes lower, down to the individual bill level, the policy space recovered from roll call votes becomes indeed multidimensional. Therefore, similar to Crespin and Rohde (2007), they conclude that the unidimensionality is “largely an artifact of the estimation process aggregated to the two-year Congress” (Roberts, Smith and Haptonstahl 2008, 6).

A slightly different approach is to examine different stages of the policy making process: from the policy proposal stage, through the final passage voting stage, and to the policy implementation stage. Talbert and Potoski (2002) show that the policy space is multidimensional if we analyze the cosponsorship data, but that it becomes unidimensional if we have final passage voting data. Potoski and Talbert (2000) additionally show that the policy space once again becomes multidimensional if we use data on federal distributive policy awards (to congressional districts). In general, they argue that the dimensionality is

reduced during the floor stage when the actual policy space of legislators' preferences is multidimensional.

While these are all meaningful findings by themselves, what is missing is a more systematic analysis on the *determinants* of dimensionality. At every level of aggregation, there is a variation in dimensionality to be explained. In particular, individual bills are subject to a careful examination because most spatial theory accounts of Congress are based on an assumption in unidimensionality at the bill level. This chapter aims to assess the determinants of this variation in dimensionality by focusing on the role of restrictive special rules in the House of Representatives.

4.2 Perspectives on Restrictive Special Rules

Restrictive special rules have been considered one of the most important features of agenda control in the contemporary U.S. House. During the textbook era, special rules functioned as a “traffic cop” (Sinclair 1995, 139). Since the postreform era, they have been increasingly reducing uncertainty and enhancing legislative efficiency (Bach and Smith 1988). From time to time, they served the interests of the majority party (Smith 1989; Sinclair 1995), and sometimes promoted special interests for the conservative coalition (Schickler and Pearson 2009).

The major perspectives on legislative organization have emphasized different aspects of restrictive rules. For instance, the distributive perspective considers restrictive rules to facilitate giant log-rolls among legislators on distributive policy. This perspective sees the committee system as a mechanism to distribute particularistic benefits to multiple and heterogeneous constituents (Mayhew 1974; Weingast and Marshall 1988). In an ideal setting, this mutually beneficial agreement can be obtained through the norm of reciprocity between members and committees. Long-run durability, however, can be guaranteed only by

a more formal enforcement mechanism such as restrictive rules (Fiorina 1987; Weingast 1991).¹ Therefore, under the distributive perspective, restrictive rules bind members with diverse policy interests together in order to commit to pre-arranged plans.

On the other hand, the informational perspective treats restrictive rules as an incentive mechanism for committee specialization. Under this perspective, the committee system is designed to provide the parent chamber with informational benefits regarding the policy outcome (Krehbiel 1991). In order for committees to convey costly but accurate information, there should exist incentives, one of which is an adoption of restrictive rules (Gilligan and Krehbiel 1987, 1989).

Third perspective is partisan, where special rules are considered as a tool to pursue partisan goals. In general, the Rules Committee that reports every special rule to the floor is considered the Speaker's committee (Sinclair 1995). And, it is known to provide the party leadership with both positive and negative agenda control power (Cox and McCubbins 1993, 2005). Moreover, as Dion and Huber (1996) argue, the use of restrictive rules actually shifts a policy outcome from the floor median toward the majority party median.

Because these three perspectives are competing against one another, scholarly attention has been given to a test for which perspective is better served. Marshall (2002), for instance, derives and tests several hypotheses on the adoption of restrictive rules. He first presents three major expectations: (1) the distributive perspective suggests that restrictive rules are more likely to be used for pork barrel legislation; (2) the informational perspective argues that the use of restrictive rules are negatively correlated with committee homogeneity and committee outliers; and (3) the partisan perspective claims that restrictive rules are desired when the committee is close to the majority party median. According to him, while no

¹There is some disagreement on this particular point. Shapiro (1987) and Bach and Smith (1988) argue that restrictive rules preclude logrolling. In this chapter, I rely on accounts from the original distributive perspective.

single theoretical account is entirely robust over time, the partisan perspective turns out to be the most reliable explanation during the recent period.

Roberts (2008) moves beyond the contemporary period, and conducts a similar test for the late 19th and early 20th century House. According to him, what drives the adoption of restrictive rules are mainly partisan factors such as intra-party agreements, inter-party disagreements, and a loyal Rules Committee.

While different perspectives provide us with rich stories about why and how restrictive rules are adopted, the effect of restrictive rules on our main interest, dimensionality, was barely known to the literature. A general idea starts with a simple observation that the period for increased use of restrictive rules corresponds to the period for increased dominance of unidimensional policy space. However, there should be a more rigorous assessment of the theoretical and empirical relationship between restrictive rules and dimensionality.

4.3 Manipulation of Dimensionality and Special Rules

Although he is silent on the explicit connection between special rules and dimensionality, Riker (1986) sheds light on this relationship by introducing a concept of “heresthetics.” Heresthetics means the art of political manipulation, where politicians structure the world strategically so that they can win the game. One of the most efficient ways to conduct this endeavor, according to Riker, is through manipulating dimensionality. That is to introduce a *new* dimension that could be very salient to players in order to upset the current equilibrium.² This becomes extremely powerful because the manipulation works even though those who are manipulated know the fact that they are being manipulated. Once a new

²The idea that self-interested politicians may strategically introduce a new dimension is not at all new. Literature on party realignments has focused on the role that new issues play in disrupting an existing party system. Refer to Sundquist (1983) for more detail.

salient dimension is revealed, the salience affects everyone regardless of their attitudes toward the new dimensional issue.

For example, Evans (1994) argues that committee leaders utilize “distributive” dimensions in order to attract floor members to vote for them, despite the ideological opposition to the bill itself. She examines the 1987 highway and urban mass transit reauthorization bill with a special focus on the inclusion of highway “demonstration” projects to the bill. She finds that members who received demonstration projects were significantly more likely to support the bill, and that interviews with congressional staffs verified the strategic considerations surrounding the passage of this bill.

In addition, Hixon and Marshall (2007) provide a similar analysis with the 1997 emergency supplemental appropriations bill. Among others, they examine why members switch their votes on two different special rules votes for the same bill. They find that vote switchers were reacting to constituency interests (i.e. the currency paper business), not to their ideological considerations. Therefore, similar to Evans (1994), they conclude that party leaders try to utilize a strategy that adds an additional secondary dimension into a bill in order to attract “moderate” members to vote along the party line.

While these are all geared toward a rationale for the inclusion of *distributive* policies into a bill, exactly same type of arguments can be made to explain the explicit *partisan* use of dimensionality. Consider a situation where the committee of the bill origin comes up with their own proposal, perhaps not entirely related to the liberal-conservative dimension. When it is reported to the floor, party leaders could include several amendments that belong primarily to the liberal-conservative dimension with the hope that this new (but liberal-conservative) dimension becomes the salient “secondary” dimension about which Riker spoke.

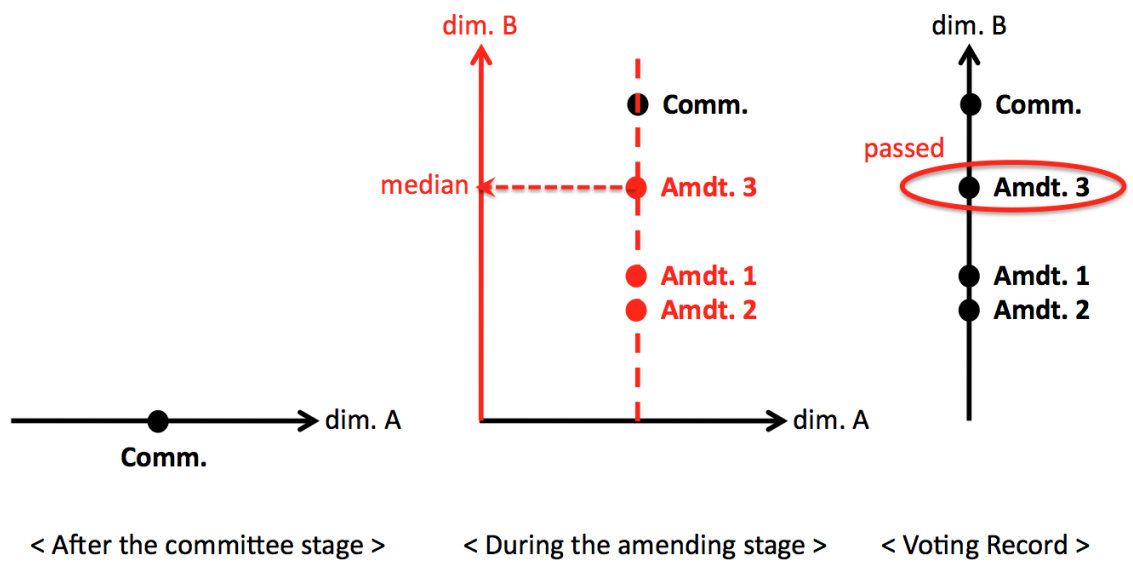


Figure 4.1: Manipulation by Utilizing Dimensionality

Figure 4.1 nicely captures this scenario. The “dim. A” axis is the dimension of committee’s interest or jurisdiction.³ The point “Comm.” represents the committee proposal, possibly the committee median on the “dim. A” axis. “Amdt.” 1, 2, 3 indicates a list of amendments specified through the special rule. They look all similar with respect to the A dimension, but different with respect to the B dimension. Probably, the “dim. B” axis is the dimension that party leaders as well as the party itself care mostly about, which is the liberal-conservative dimension. Multiple amendments are likely to be offered because this could increase the saliency of a new dimension (“dim. B” axis). Finally, legislators vote on four alternatives, which are all aligned on the “new” liberal-conservative dimension. The final outcome is the median on the “dim. B” axis.

With a very well designed special rule, party leaders can actually manipulate the process and produce a voting coalition based on the liberal-conservative dimension. In that way, party leaders can have their preferred outcome, and, at the same time, minimize the possible influence of unexpected dimensions to ruin the contents of the pre-arranged bill.

One consequence from this manipulation process is that the final voting record looks *as if* it were unidimensional. If the special rule allows a certain list of amendments, such as Amdt. 1, Amdt. 2, and Amdt. 3 in Figure 4.1, then the original dimension from the committee stage (“dim. A”) disappears and only the new liberal-conservative dimension (“dim. B”) stands out from the standard roll call voting analysis: a final passage vote could be well predicted by the liberal-conservative voting bloc.

The question, then, is how often we experience manipulations described by Evans (1994) and Hixon and Marshall (2007), and how often we see my alternative “partisan” manipulations in Figure 4.1. Wright and Schaffner (2002) and Jenkins (1999) give us

³This “dim. A” needs not be always non liberal-conservative dimension. However, when committee decisions are about entirely non liberal-conservative issues, the partisan manipulation of dimensionality becomes more obvious.

a clue. A comparative study of state legislatures shows that “partisan” legislatures produce more unidimensional policy space than a “non-partisan” legislature - Nebraska - does (Wright and Schaffner 2002). Similarly, the “non-partisan” Confederate Congress during the Civil War period produces more multidimensional policy space than the “partisan” U.S. Congress does (Jenkins 1999). Therefore, if partisan considerations are the main factors, then we are more likely to observe my alternative type of manipulations.

Additionally, I argue that the manipulation through distributive dimensions could result in *no* change for the dimensional structure of roll call voting. As rightly noted in Hixon and Marshall (2007) and Smith (2007), persuasion aimed at a very few moderates might not produce statistically significant effects, although they are surely one of the most substantively significant effects. As shown in Figure 4.2, vote switching by a small number of moderate members could only change the *estimated* location of the bill, with pretty much same *estimated* dimensional structure. This is especially true because an additional distributive benefits are usually targeted at the very edge of the voting bloc.

Another way to describe this argument is to use the language of existing literature on parties. With respect to positive agenda control, a unidimensional policy space would be appealing for two reasons. First, party leaders can form “easy” floor coalitions (Cox and McCubbins 1993) because the liberal-conservative distinction is an “effective default cleavage” in Congress (Wright and Schaffner 2002, 370). Second, political parties can reinforce a “clear” image or brand name from a ready-made liberal-conservative distinction.

Moreover, a unidimensional policy space would also be appealing in the sense of negative agenda control. According to Cox and McCubbins (2005), the worst scenario for the parties, especially for the majority party, would be an “ugly” defeat in voting. When the policy space is multidimensional, there can always exist unexpected losses: the chaos theorem (McKelvey 1976; Schofield 1978). But, a unidimensional policy space is more likely to provide the majority party leaders with predicted outcomes. Therefore, by and

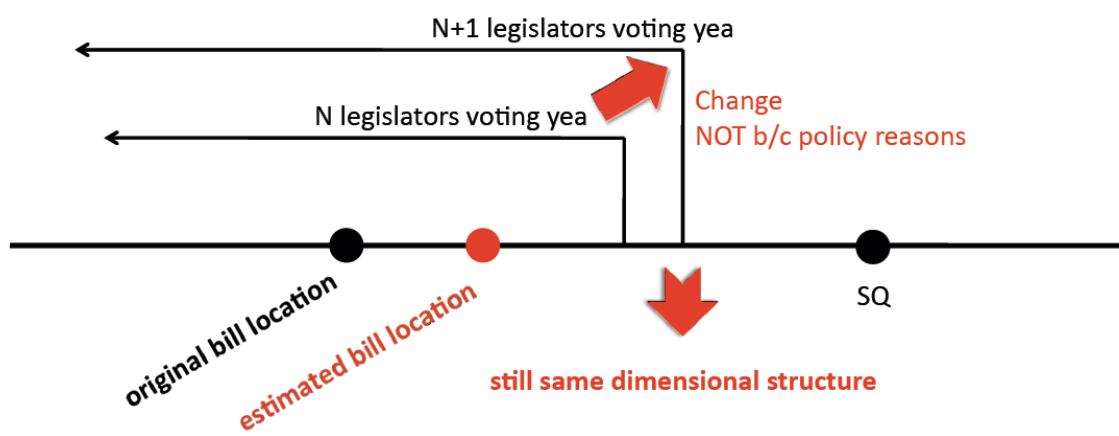


Figure 4.2: Pork Barrel Politics and Dimensionality

large, the use of restrictive rules (i.e., allowing selective amendments) could result in a more “unidimensionally-looking” policy space.⁴

One could easily think of two alternative explanations.⁵ First, the distributive perspective would predict the very opposite of my partisan perspective. Since the restrictive rules are important for binding together a giant log-rolling coalition, they are necessarily correlated with high dimensions and diverse policies. Moreover, if distributive considerations are the main factor when forming floor coalitions, as in Evans (1994) and Hixon and Marshall (2007), then the use of restrictive rules could possibly protect distributive dimensions throughout the amending process, therefore, generate a more multidimensional policy space.⁶

Second, the informational perspective would predict no relationship between the use of restrictive rules and the dimensionality of bills. This is mainly because special rules here serve for *informational* benefits of the entire chamber. In addition, the informational perspective, at first, assumes a unidimensional policy space, so there can be no room for any variation in dimensionality.

To summarize, three different perspectives of legislative organization have entirely different implications on the role of restrictive rules with respect to the dimensionality, as nicely shown in Table 4.1. The partisan perspective predicts that the use of restrictive rules decreases the dimensionality of bills. According to the distributive perspective, restrictive rules are more likely to be related with high dimensional bills. And, no relationship is predicted or desired under the informational perspective. Therefore, in some sense, an em-

⁴It could be really unidimensional. But, it suffices to make the policy space *look* unidimensional.

⁵I derive alternative explanations from the two prominent perspectives on legislative organizations. However, these are not explicitly considered in the original literature.

⁶As pointed above, I believe that this effect *could* be minimal.

Table 4.1: Predicted Relationship with Dimensionality

	Increase (+) or Decrease (-) Dimensions
Restrictive rules - main focus	
- Partisan perspective	—
- Distributive perspective	+
- Informational perspective	NO
Polarization	—
Issue domain	
- Agriculture	+
- Civil rights	+
Complexity	
- Multiple bills	+
- Multiple referral	+

empirical analysis on the relationship between restrictive rules and dimensionality could be a nice opportunity to test these three general perspectives.

To make the empirical analysis complete, the test for the relationship should be controlled by several other important factors from the literature, as also shown in Table 4.1. Most prominent is the effect of polarization over time (Roberts, Smith and Haptonstahl 2008). Issue domains, especially agriculture and civil rights, are known to affect dimensionality (Crespin and Rohde 2007; Roberts, Smith and Haptonstahl 2008). The complexity of an individual bill is also a consideration (Hurwitz, Moiles and Rohde 2001). Because these control factors are repeatedly reported to greatly influence dimensionality, it would be best to find a significant relationship between the use of restrictive rules and the dimensionality of bills, even after controlling these effects.

4.4 Empirical Analysis

I have conducted an empirical analysis for the 23 Congresses of the 1947-1994 period. Specifically, I have focused on every piece of “major legislation” identified by Clinton and Lapinski (2006) in this period, which yields 230 bills. Among those, I selected all

legislation that had a roll call voting record, which yields a total observation of 186 bills (80.87%). The Appendix includes the list of all legislation and roll call votes that are subject to the analysis in this chapter.

The dependent variable is the dimensionality of individual legislation. Following Poole and Rosenthal (1997, 29-30, 48-51), it is measured by $(PRE2 - PRE1)$ of the bill's final passage vote, which is the improvement of the proportional reduction in error⁷ from the one-dimensional DW-NOMNATE model to the two-dimensional DW-NOMINATE model.⁸ A larger value means that a bill is less unidimensional (i.e., more likely to be multidimensional), and the distribution of the variable is shown in Figure 4.3.

The key independent variables are the contents of special rules for each individual legislation. I collect and code every special rule that is issued and recorded in *House Journal* and/or *Congressional Record*. The first group of variables are closed vs. open rules:⁹

- Open rule / modified open rule: allows any amendments under the five minute rule¹⁰
- Modified closed rule: permits only those amendments designated by the Rules Committee
- Closed rule: permits no amendments to be offered

⁷ $PRE = (\text{Minority Vote} - \text{DW-NOMINATE Classification Errors}) \div (\text{Minority Vote})$. This actually measures how well the ideal points, recovered from the DW-NOMINATE model, predict the final passage vote. An alternative way to measure the dimensionality of individual bills is to use optimal classification (OC) methods (Poole 2000, 2005) by utilizing multiple votes for a given bill. However, there are not enough votes to conduct the OC methods especially prior to 1973, when the House adopted the electronic voting in the Committee of the Whole (Roberts and Smith 2003).

⁸There could be an alternative way to specify this measure: $\text{marginal } PRE_{12} = ((1 - PRE2) - (1 - PRE1)) \div (1 - PRE1)$. It is advocated by Roberts, Smith and Haptonstahl (2008). However, substantive conclusions in this chapter do not change by adopting this alternative measure.

⁹I follow the official categorization by the Committee on Rules of the U.S. House of Representatives: <http://www.rules.house.gov/lpp/pop31599.htm>. Accessed on February 11, 2010.

¹⁰Modified open rules are basically open rules but have an overall time limit on the amendment process and/or a requirement of amendments printed in *Record*.

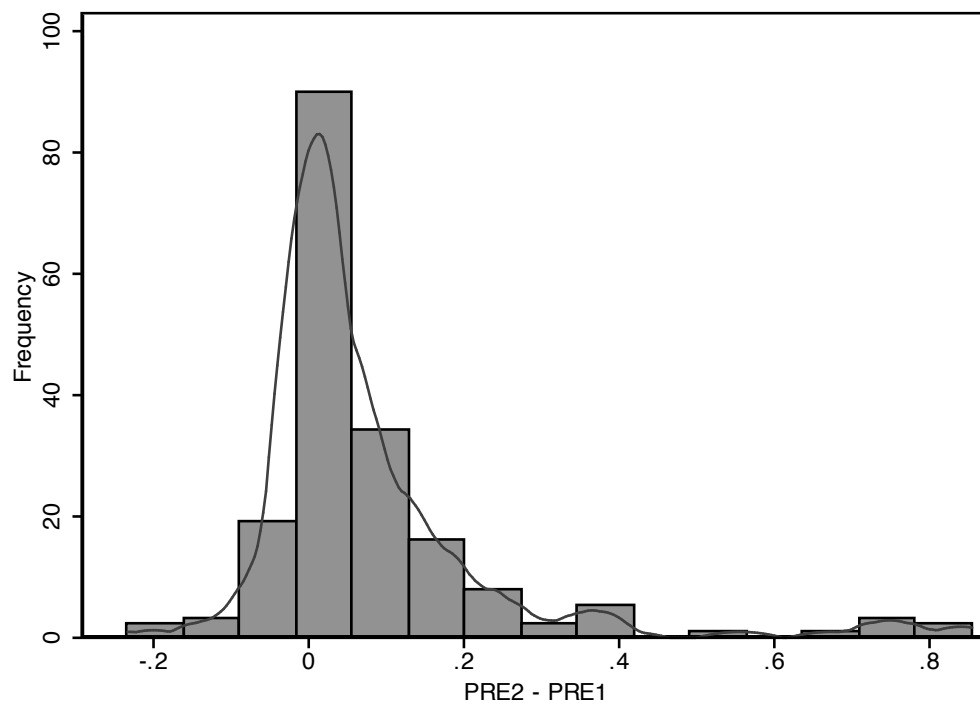


Figure 4.3: Histogram of (PRE2 - PRE1)

And, the next group of special rule contents variables (all dummies) include:

- Whether or not waiver is granted
- Whether or not the rule allows certain amendments only
- Whether or not amendments are listed in the special rule itself
- Whether or not all amendments are prohibited
- Whether or not there is a requirement for advanced notice of amendments
- Whether or not there is a time limit on amendment debate

In addition, I also record the number of bills (introduced bills) that are associated with each piece of legislation, and the number of standing committees that each bill is referred to. I use the Clausen code for the issue contents of the legislation, which I simply take from Poole and Rosenthal's website,¹¹ where 5 categories are recorded: (1) government management of the economy; (2) social welfare; (3) agriculture; (4) civil liberties; and (5) others. In order to control time effects (or polarization effects), I also include Congress number and Congress number squared.¹²

Because the dependent variable is continuous, I employ the ordinary least squares (OLS) estimation for multivariate linear regression models. There are two groups of models: one using closed vs. open rules categorization, and another using detailed contents dummies. In addition, I estimate models first with special rules variables only, and later with the control variables included.

Table 4.2 shows the summary results for four models. First and foremost, an adoption of restrictive special rules significantly decreases the dimensionality of legislation across all four model specifications. When the closed vs. open rules categorization is used in Model 1, both modified closed rules and closed rules are associated with decreased dimen-

¹¹http://voteview.com/dw-nominate_textfile.htm. Accessed on March 15, 2010.

¹²This quadratic formula is to capture polarization after the 1970s, not before (Wooldridge 2003).

Table 4.2: Determinants of Bill-Level Dimensionality

	Model 1	Model 2	Model 3	Model 4
Special rule - Modified closed	-0.079* (0.019)	-0.074* (0.017)		
Special rule - Closed	-0.083* (-0.024)	-0.126 (0.067)		
Waiver granted			-0.050* (0.024)	-0.037 (0.020)
Certain amendments only			-0.075* (0.024)	-0.062* (0.022)
Amendments listed in special rule			0.098 (0.052)	0.050 (0.032)
All amendments prohibited			-0.039 (0.022)	-0.033 (0.072)
Advanced notice of amendments			-0.028 (0.038)	0.026 (0.071)
Time limit on amendment debate			-0.038 (0.040)	0.004 (0.036)
Congress		0.088* (0.037)		0.083* (0.042)
Congress-squared		-0.001* (0.000)		-0.001* (0.000)
Clausen issue - Social welfare		0.034 (0.024)		0.029 (0.024)
Clausen issue - Agriculture		0.041 (0.029)		0.027 (0.032)
Clausen issue - Civil liberties		0.295* (0.083)		0.272* (0.083)
Clausen issue - Others		0.001 (0.021)		0.001 (0.022)
Number of bills		0.030 (0.017)		0.025 (0.016)
Number of committees		0.025* (0.008)		0.021* (0.008)
(Intercept)	0.099* (0.015)	-3.791* (1.692)	0.104* (0.017)	-3.516* (1.931)
N	186	186	186	186
R ²	0.046	0.335	0.096	0.339
F-statistic	9.71*	4.05*	4.02*	2.87*

OLS; heteroskedasticity-robust standard errors in parentheses; * $p < 0.05$; “(modified) open” is the base category for Special rule; “Government management of the economy” is the base category for Clausen issue

sionality. This is similar even after controlling several important variables (in Model 2). Modified closed rules are consistently significant in reducing the dimensionality of legislation. And, closed rules have somewhat greater effects on low dimensionality than modified closed rules even though its statistical significance does not entirely reach the conventional threshold in Model 2 ($t = -1.88$, $p = 0.083$).

When detailed content dummies are used in Model 3 and Model 4, waivers and amendment restrictions turn out to be significant in lowering the dimensionality of legislation. As in Model 2, these effects are still valid even after including several control variables (in Model 4). If the special rule allows certain amendments only, then it is more likely to generate low dimensionality. And, granting waivers has somewhat smaller effects than amendment restrictions (p -value changes to 0.071 in Model 4).

The control variables in Model 2 and Model 4 largely show expected patterns. A slightly higher level of dimensionality is the norm in the 1940s, and it increases a little bit until around the late 1960s,¹³ after which it decreases. This generally fits our expectation for polarization. When the legislation is about civil liberties, it tends to be multidimensional. Agricultural issues, on the other hand, are not entirely multidimensional, which is different from the expectations of the literature. Lastly, if the legislation is more complex (i.e., the legislation is associated with more bills and involved in more committees), then it tends to have multidimensional policy space.

4.5 Discussion

It should be reemphasized that the original three perspectives do not automatically provide us with predictions in Table 4.1. My theory on the partisan manipulation of dimen-

¹³When $y = ax^2 + bx + c$, where $a < 0$, $b > 0$, the value y has its maximum at $x = -\frac{b}{2a}$. Model 2 shows that the dimensionality is maximized in the 89th Congress ($= \frac{0.0888}{2 \times 0.0005}$).

sionality is actually a mixture of the partisan perspective of Cox and McCubbins (1993, 2005) and the heresthetics theory of Riker (1986). First, Cox and McCubbins' partisan perspective suggests that political parties have an incentive to create a unidimensional voting bloc. Since the liberal-conservative distinction is the default cleavage in Congress, a voting coalition could be easily constructed along this liberal-conservative dimension. With this voting bloc occurring regularly, the party image (or party brand name) is clearly reinforced over time. In addition, political parties can avoid unpredictable defeats due to multidimensional voting. Second, my partisan manipulation theory builds upon Riker and argues that a well-designed special rule could effectively produce a unidimensional voting record. Amendments specified in the special rule make the liberal-conservative dimension salient among legislators. Using this new dimension, political parties promote "partisanly" desirable policy outcomes.

On the other hand, my theoretical account more or less contradicts both the distributive and the informational perspectives. At first, the manipulation of dimensionality appears to support the distributive perspective: distributive policy benefits are added in order to create a sufficient voting coalition. However, as I demonstrated in Figure 4.2, this effort has a selective focus at the margin of voting bloc, and is not a manipulation of dimensional "structure" for all legislators. The distributive perspective instead suggests that the use of restrictive rules binds together a giant log-rolling coalition, which is inevitably related with multidimensional policy space in nature. This is the very opposite of my partisan manipulation of dimensionality by use of restrictive rules.

The informational perspective does not allow a room for partisan manipulation of dimensionality. Any attempts to manipulate the dimensionality to promote a certain interest would reduce the informational benefits that committees bring to the floor. If so, the policy space should be completely unrelated with the use of restrictive rules. Rather, it should depend solely on the underlying true preference structure of legislators.

By and large, my theoretical account for the relationship between restrictive rules and low dimensionality could be considered as additional evidence for the partisan perspective, if not a pure derivative of it. Although the empirical assessment of this relationship does not entirely determine the relevance for each perspective, it could reveal some dynamics underneath the use of restrictive rules at least in a more systematic way.

An empirical analysis with a new collection of data indicates that restrictive rules contribute to lower dimensionality. As such, this strongly supports my partisan manipulation theory, and ultimately the partisan perspective in general as an explanation of the relationship between restrictive rules and dimensionality. Both the distributive perspective and the informational perspective, on the other hand, do not seem to provide us with relevant rationale. To reiterate, political parties and party leaders are likely to utilize restrictive rules in order to manipulate dimensionality.

4.6 Conclusion

Despite rich research on dimensionality in the U.S. Congress, we have not yet answered basic questions on the determinants of dimensionality. This paper is one of the first attempts to assess the variation in dimensionality for individual bills. When doing so, I focus on the role of restrictive rules as well as several usual suspects. I derive predictions in conjunction with three perspectives of legislative organization, and test their relevance in explaining the relationship between restrictive special rules and dimensionality. Ultimately, the partisan perspective provides us with the most reliable rationale. Political parties are intentionally reducing dimensionality by the use of restrictive rules in order to construct “easy” floor coalitions and “clear” party image.

While this paper nicely shows a general pattern after World War II, there could be a much more rigorous and detailed examination of this trend. For example, the paper deals

with only major legislation, so other types of legislation might (or might not) produce different patterns in dimensionality. The period of the analysis here covers only a Democratic majority, but a different majority party could have entirely different dynamics regarding the relationship between restrictive rules and dimensionality. In essence, a more nuanced explanation is expected for future research.

4.7 Appendix

The following is the list of major legislation identified by Clinton and Lapinski (2006) that are also included in the DW-NOMINATE estimation by Poole and Rosenthal (1997). The original list in Clinton and Lapinski (2006) includes 230 bills in total for the 1947-1994 period. However, 44 bills are excluded in the DW-NOMINATE estimation because they have no roll call voting record (12 bills) or they were passed by near-unanimous votes (32 bills). If there is a final passage vote, this vote is used to calculate PRE's of each legislation (162 bills in this category). If not, other available votes are used: the selection order is (1) conference report vote (17 bills), (2) veto override vote (1 bill), (3) motion to recommit vote (2 bills), and (4) amendment vote (4 bills).

Table 4.3: List of Legislation included in the Analysis

Congress	Year	Bill	Vote Used	Contents of Legislation
80	1947	s938	final passage	Greece and Turkey
		hr3020	final passage	Labor Management Relations Act of 1947
		s564	final passage	Presidential succession
	1948	hr4790	final passage	Revenue Act of 1948
		s2202	final passage	Foreign Assistance Act of 1948
81	1949	s1070	final passage	Establish a national housing policy
		hr5856	final passage	Fair Labor Standards Act
		hr5895	final passage	Foreign Military Assistance Act
		hr5345	final passage	Agriculture Act
		hr1211	final passage	Authority of President under Tariff Act
	1950	hr6000	final passage	Social Security Act Amendments of 1949
		hr7797	final passage	Economic Cooperation Act of 1950
		hr9176	final passage	Defense Production Act of 1950
		hr9490	final passage	Registration of Communist organizations
		hr8920	final passage	Revenue Act of 1950
		hr1612	amendment	Authority of President to enter into foreign trade agreement
82	1951	hr5113	final passage	Foreign military and economic aids
		hr4473	final passage	Increase individual and corporate income taxes and excise taxes
		hr5678	veto override	Revise immigration laws to remove some discriminations
	1952	hr5678	veto override	Revise immigration laws to remove some discriminations

Congress	Year	Bill	Vote Used	Contents of Legislation
83	1953	hr4198	final passage	Submerge Lands Act
	1954	s2150	final passage	Create the Lawrence seaway development corporation
		hr7839	final passage	Provide for housing construction and elimination of slums
		hr8300	final passage	Revise the internal revenue laws
		hr9757	final passage	Amend the atomic energy act
		hr9366	final passage	Provide for expanded coverage and survivors insurance program
84	1955	hr1	final passage	Extend authority of President to enter into trade agreements
		s2168	final passage	Increase the national minimum hourly wage
	1956	s500	final passage	Construct Colorado river project
		hr10875	final passage	Enact agricultural act, soil bank
		hr10660	final passage	Federal aid road act
		hr7225	final passage	Social security act, disability insurance
85	1957	hjres117	final passage	Middle east economic and military cooperation
		hr6127	final passage	Civil rights act
	1958	hr7999	final passage	Statehood for Alaska
		hr12591	final passage	Trade agreement extension act
		s4071	final passage	Agricultural price support programs
		hr13247	motion to recommit	National defense education act
86	1959	s50	final passage	Give Hawaii statehood
		s1555	conference report	Prevent certain abuses in labor organizations
	1960	hr8601	final passage	Civil Rights Act of 1960
		hr12580	final passage	Social Security Amendments of 1960
87	1961	s1	final passage	Area Redevelopment Act
		hr3935	final passage	Fair Labor Standards Amendments of 1961
		s1922	final passage	Housing Act of 1961
		h6027	final passage	Social Security Amendments of 1961
		s1643	conference report	Agricultural Act of 1961
		hr7500	final passage	Peace Corps Act
		hr9118	final passage	Establish US Arms Control Agency
	1962	s1991	final passage	Manpower development and training act
		hr10606	final passage	Public welfare amendments of 1962
		hr11970	final passage	Trade expansion act
		hr10650	final passage	Revenue act
88	1963	hr12	final passage	Training physicians, dentists, and professional public health personnel.
		s1576	final passage	Provide assistance in combating mental retardation
		hr6143	final passage	Establish college aid
		hr6518	final passage	Programs for the prevention of air pollution
	1964	hr8363	final passage	Amend the Internal Revenue Code of 1954
		hr6196	final passage	Project to lower costs of cotton production
		hr7152	final passage	Enforce the constitutional right to vote
		s6	final passage	Assistance to develop mass transportation system
		s2642	final passage	Mobilize the human and financial resources to combat poverty in the US
		hr10222	final passage	Strengthen the agricultural economy

Congress	Year	Bill	Vote Used	Contents of Legislation
89	1965	s3	final passage	Appalachian Regional Development Act of 1965
		hr2363	final passage	Strengthen nation's elementary and secondary school education
		hr6675	final passage	Social Security Amendments of 1965, medicare
		s1564	final passage	Enforce the 15th amendment to the Constitution
		hr7984	final passage	Housing and Urban Development Act of 1965
		hr6927	final passage	Establish Department of Housing and Urban Development
		s1483	motion to recommit	Establish National Foundation on the Arts and Humanities
		hr2580	final passage	Immigration and Nationality Act of 1965
		s2084	final passage	Provide for scenic development and road beautification of the highway system
		hr9567	final passage	Higher Education Act of 1965
	1966	hr13712	final passage	Increase the federal minimum wage
		hr15963	final passage	Create a cabinet level department of transportation
		s3708	final passage	Demonstration cities and metropolitan development act
		s985	final passage	Fair packaging and labeling act
90	1967	s1160	final passage	Public Broadcasting Act of 1967
		1968	hr2516	Penalties for interference with persons exercising their civil rights and prohibit discrimination in sale or rental of housing
		hr5037	final passage	Omnibus Crime Control and Safe Streets Act, 1968
		hr15414	conference report	Revenue and Expenditure Control Act, 1968
		s3497	final passage	Housing and Urban Development Act of 1968
		hr16363	final passage	Wholesome Poultry Products Act
		s827	final passage	Establish a national trails system
		1969	hr13270	Tax Reform Act of 1969
	1970	hr4249	final passage	Extend the Voting Rights Act of 1965
		hr17070	final passage	Postal Reorganization and Salary Adjustment Act
		s30	final passage	Organize Crime Control Act of 1970
		hr18546	final passage	Agricultural Act of 1970
		hr18582	final passage	Amend the Food Stamp Act of 1964
92	1971	hr4690	final passage	Increase the ceiling on the public debt limit and provide a 10% increase in Social Security benefits
		s31	final passage	Provide federal assistance for programs of public service employment during periods of high unemployment
	1972	hr10947	conference report	Revenue Act of 1971
		s382	conference report	Promote fair practices on the conduct of election campaigns for federal offices
		hr1746	final passage	Promote equal employment opportunities for American workers
		s659	final passage	To enact omnibus education amendments of 1972
		hr15390	final passage	To extend through 10/31/72 the \$450 billion public debt limit
		s2770	final passage	Amend the Federal Water Pollution Control Act

Congress	Year	Bill	Vote Used	Contents of Legislation
92	1972	hr14370	final passage	Authorize federal collection of state individual income taxes and other purposes
		hr10729	final passage	Amend the Federal Insecticide, Fungicide and Rodenticide Act
		s3419	final passage	Protect consumers against unreasonable risk of injury from hazardous products
93	1973	hr1	final passage	Amend the Social Security Act
		s1888	final passage	Extend and amend the Agricultural Act of 1907
		s502	amendment	Authorize appropriations for the construction of certain highways
		hjres542	conference report	Govern the use of the Armed Forces by the president during the absence of a declaration of war
		s1081	final passage	Establish a federal policy granting rights-of-way across federal lands
		s1435	final passage	Reorganize the governmental structure of the DC
		hr11333	final passage	Provide a multi-phased 11% increase in Social Security benefits
	1974	hr9142	final passage	Provide for restructuring of the rail transportation system in the midwestern and northeastern regions
		s2747	final passage	Provide a 3-stage increase in the hourly minimum wage
		hr7130	final passage	Reform congressional procedures for enactment of fiscal policy
		s3066	final passage	Housing and Community Development Act of 1974
		hr11510	final passage	Provide a new Energy Research and Development Administration
		s3044	conference report	Provide for public financing of Federal primary and general election campaigns
		s386	conference report	Authorize grants to states and local agencies to assure adequate commuter transportation service in urban areas
94	1975	hr10710	final passage	Trade Reform Act of 1973
		hr2166	final passage	Tax Reduction Act of 1975
		hr6219	final passage	Amend and extend the Voting Rights Act of 1965
		hr10481	final passage	Provide seasonal financing for the city of New York
	1976	s622	final passage	Provide standby energy authority
		s2718	amendment	Enact Rail Services Act of 1975
		hr10612	final passage	Proposed Tax Reform Act of 1976
		s3149	final passage	Require restrictions in testing and use of chemical substance to protect human health and the environment
		hr10210	final passage	Require states to extend unemployment compensation coverage
		s507	final passage	Provide for the management, protection and development of the national resources land

Congress	Year	Bill	Vote Used	Contents of Legislation
95	1977	hr3477	final passage	Enact the Tax Reduction and Simplification Act of 1977
		hr2	final passage	Enact the Surface Mining Control and Reclamation Act of 1977
		s826	final passage	Establish a Department of Energy
		hr6161	final passage	Enact the Clean Air Act Amendments of 1977
		s275	final passage	Enact the Food and Agricultural Act of 1977
		hr3744	final passage	Increase the minimum levels under the Fair Labor Standards Act
		hr9346	final passage	Enact the Social Security Financing Amendments of 1977
		hr3199	final passage	Enact the Federal Water Pollution control Act amendments of 1977
	1978	s2640	final passage	Reform the Civil Service laws
		hr13511	final passage	Enact the Revenue Act of 1978
		hr5037	conference report	Revise the duty on certain items
		hr5289	conference report	Revise the duty on certain items
		hr5263	conference report	Revise the duty on certain items
		hr5146	conference report	Revise the duty on certain items
		hr4018	conference report	Revise the duty on certain items
96	1979	s210	final passage	Establish a Department of Education
	1980	hr5860	final passage	Authorize loan guarantees to the Chrysler Corp
		hr4986	final passage	Provide for a gradual lifting of rate ceiling on time and savings deposits and authorize certain financial institutions to offer interest-bearing checking accounts
		hr3919	conference report	Impose a windfall profits tax on domestic crude oil
		s932	final passage	Authorize funds to establish the production of synthetic fuels, gasohol, solar energy, renewable resources, geothermal energy, to establish an energy conservation program and energy supply targets, and to extend the Defense Production Act
		s2245	final passage	Streamline regulations of the motor carrier industry
		s1946	final passage	Provide railroads with more pricing rate flexibility and contract provisions
		hr39	final passage	Designate certain public lands in the state of Alaska for inclusion under permanent federal ownership and management for protection of their resource values
		hr7020	final passage	Authorize funds for fiscal 1981-86 to provide for the safe and adequate treatment of hazardous substances released into the environment
	1981	hr4242	final passage	Amend the Internal Revenue Code of 1954
		hr3982	final passage	Provide for reconciliation pursuant to section 301 of the First Concurrent Resolution on the Budget for FY82

Congress	Year	Bill	Vote Used	Contents of Legislation
97	1981	s884	final passage	Revise and extend programs to provide price support and productions incentives for farmers to assure an abundance of food and fiber
		hr4995	final passage	Make appropriations for the Dept of Defense for fiscal 1982
	1982	hr3112	final passage	Extend certain provisions of the Voting Rights Act of 1965
		hr4961	conference report	Make misc. changes in the tax laws
		hr6267	final passage	Assist the thrift industry
		hr6211	final passage	Authorize appropriations through FY89 to improve the nation's highway system
98	1983	hr1900	final passage	Implement the consensus recommendations of the National Commission on Social Security Reform
		s675	final passage	Authorize funds for FY84 for the DOD
	1984	hr4170	final passage	Provide for certain spending reductions and revenue increases for FYs 1985-1987
99	1985	hjres648	final passage	Make continuing appropriations for the FY85
		hr2577	final passage	Appropriate supplemental funds for FY85
		hjres372	conference report	Gramm-Rudman-Hollings legislation setting
		hr2100	final passage	Revise agricultural programs and extend them through FY90
101	1986	hr4868	amendment	Impose economic and other sanctions against South Africa
	1989	hr3838	conference report	Revise the federal income tax system
		hr1278	final passage	Reform, recapitalize and consolidate the fed. deposit insurance system
	1990	hr2710	final passage	Increase the minimum wage
		s933	final passage	Establish a clear and comprehensive prohibition against discrimination on the basis of disability
		hr5835	final passage	Provide for reconciliation pursuant to section 4 of the concurrent resolution on the budget for FY91
		s1630	final passage	Amend the Clean Air Act
		s566	final passage	To achieve more affordable housing and to increase home ownership
		s2830	final passage	Extend and revise agricultural price-support and related programs
102	1991	s358	final passage	Amend the Immigration and Nationality Act
		s1745	final passage	Amend the Civil Rights Act of 1964
		hr2950	final passage	Develop a national intermodal surface transportation system
	1992	s12	final passage	Ensure carriage on cable television of local news and other programming
		s2532	final passage	Enact the Freedom for Russia and Emerging Eurasian Democracies and Open Market Support Act
		hr776	final passage	Provide for improved energy efficiency

Congress	Year	Bill	Vote Used	Contents of Legislation
103	1993	hr2	final passage	Establish national voter registration procedures for federal elections
		hr2264	final passage	Provide for the reconciliation pursuant to Section 7 of the concurrent resolution on the budget for fiscal 1994
		hr2010	final passage	Establish a Corp. for National Service
		hr1025	final passage	Provide for a waiting period before the purchase of a handgun and for the establish of a national criminal background check
	1994	hr3450	final passage	Implement the North American Free Trade Agreement
		hr1804	final passage	Provide a national framework for education reform
		s21	final passage	Designate certain lands in the California desert as wilderness
		hr5110	final passage	Approve and implement the trade agreements concluded in the Uruguay Round of multilateral trade negotiations

Chapter 5

Conclusion

The U.S. Congress is multidimensional. It is multidimensional because it represents various interests of American people. At the same time, it requires a special device or mechanism that overcomes the problems caused by this multidimensional policy structure. Political parties, standing committees, and legislative rules are the primary ones in the U.S. House of Representatives. They efficiently and effectively structure the legislative motivations and interests in a way that provides reliable coalitions as well as stable policy outcomes. From time to time, the majority party promotes rules changes for its ruling and creates special rules for manipulating the dimensionality. At the same time, this consequently makes the majority party vulnerable to threats of cross-party coalitions. In addition, the majority party makes use of the committee system in order to promote their collective policy interests. As such, each chapter provides nuanced stories about different stages of the legislative process.

Chapter 2, *Conditional Nature of Rules Changes*, examines why the U.S. House of Representatives has changed its standing rules regarding the principle of majority rule and minority rights. I begin by taking a critical look at previous studies on this subject, after

which I propose an alternative theory on the conditional nature of rules changes. The empirical findings reveal that different combinations of factors are required for the two distinct types of rules changes. In particular, the *size* and *homogeneity* of the majority party are the main factors for promoting majority rule while the *size* of the majority party and the *dimensionality* of policy space are the main factors for creating minority rights.

Chapter 3, *Minority Party Members on Committees*, questions why a generic legislature allows minority party members on committees. If the majority party considers the minority a burden, then it could choose to exclude minority party members entirely from the committee system. This has, however, rarely happened in history. This chapter provides one possible explanation to this puzzle via a simple signaling game. In equilibrium, I show that the majority party has an incentive to include the minority party delegation on the committee. By allowing the minority to make a public speech on the uncertainty, the majority leadership can constrain the majority committee delegation in a way to serve the party in general: the majority committee delegation, in equilibrium, moderates the bill proposal in order to respond to the minority's public speech.

Chapter 4, *Special Rules and Dimensionality*, is one of the first attempts to investigate the determinants for dimensionality of individual bills. I first develop a theory on partisan manipulation of dimensionality by focusing especially on the role of restrictive special rules in the House of Representatives: party leaders try to reduce the dimensionality of individual bills in order to have clear party image and to avoid ugly defeats. I collect every piece of "major legislation" identified by Clinton and Lapinski (2006), and record the contents of their special rules. Ultimately, the data demonstrate that restrictive rules contribute to lower dimensionality.

Each of the three analyses demonstrates a benefit from considering multiple theoretical approaches. I adopt this method of analysis because legislative organizations and behaviors of my interest are fundamentally involved with the multiple goals of individual members

and political parties, and, more importantly, in the conflict between the collective partisan goals and the individual member's goals. Furthermore, the way political parties play a role in various stages of legislative politics is deeply related to the dimensional structure of policy space in Congress. Political parties try to make use of the presence and the salience of the first dimension (i.e., liberal-conservative dimension) although the policy space in Congress is multidimensional in nature. Exactly because of this strategic choice made by political parties, the majority party is, at the same time, vulnerable to threats by cross-party coalitions of multidimensional issues.

While all of three essays, as well as the dissertation project as a sum, help us to better understand legislative politics, they each have their own limitations. Because these limitations rightly make suggestions concerning future research as well, it would be best to conclude by discussing future research topics in relation with primary limitations of each chapter.

Conditional Nature of Rules Changes

The primary limitation of Chapter 2 is on the appropriateness of the measure for rules changes: the measure is too crude. The unit of analysis is Congress (two-year period), and the intensity and the importance of rules changes are not considered at all. While this limitation applies to every work in the related literature, it does not keep us from considering possible improvements.

First, in terms of the unit of analysis, we can deal with it only for the pre-modern period. Standing rules in the House are right now amended and adopted at the start of each new Congress. We cannot observe rules changes at other points of time these days. However, if the theoretical and substantive concern is about the development of the majority rule in the 19th century, then we can construct a new set of data. An ideal data set would include not only the rules change coding for a shorter interval of time but also the re-estimation of party

characteristics and dimensionality variables. A new coding for rules changes will not be a big issue, but the re-estimation of independent variables will involve a careful identification of roll-call voting record with an employment of the optimal classification method.¹

Second, we can assess the intensity of rules changes by utilizing predicted probabilities of two types of changes. When we estimate a multinomial logit model, we can extract an information about predicted probabilities of pro-majority and pro-minority changes. These probabilities are based on a set of independent variables and estimated coefficients. We usually interpret those probabilities as how much we are likely to observe a certain type of rules changes. However, if we make an assumption that important or dramatic changes require “stronger” driving forces than normal, we are able to relate predicted probabilities with the importance and the intensity of rules changes. Then, a subjective judgment of each rules change can be compared with predicted probabilities.²

Third, rules changes can be put in the left side of the equation. Certain types of rules changes might alter the characteristics of activities on the floor, and ultimately affect the electoral fortune of the parties. A case can be made where pro-majority changes promote an effective governing by the majority party, which positively affects the building of the party brand name. Or, an excess use of the majority rule and the majority party’s discipline could force individual members not to focus on their constituency interests. Then, the influence could be reversed. It begs an empirical examination.

While all of these endeavors are about the *change* in rules, the focus on individual types of rules themselves is equally important and equally relevant for future research. For example, “failed” (or not adopted) special rules and “successful” (or adopted) discharge petitions could be nice indicators for a weakness of the majority party. Or, we can interpret these as

¹The OC method is known to be reliable for a small number of votes (Poole 2005, 46-47).

²We can use this assessment in order to figure out the usefulness of different statistical models.

a strength of either the minority party or the cross-party coalition. Then, we can examine the determinants of this variation.

Minority Party Members on Committees

As I pointed out in the discussion section of Chapter 3, my signaling model would work fine for certain types of committees, but not for every committee over a long period of time. For example, if one committee is totally an outlier where all the committee members are located in the same direction against the majority party leadership, then the presence of minority party members could not help the majority party leadership. In one sense, this criticism is not the right one because this chapter is not answering the question of how the majority party leadership controls their committee delegations in general. However, if the chapter can be interpreted in a broader context, then it suggests that further research of related topics is possible.

It comes to my immediate attention that prestige committees have disproportionately many majority party members. The story from the current literature seems to be a very unsatisfactory one: a loyal member with a “good” voting record can receive a committee membership. A more interesting question would be whether or not the stacking of several more members on the committee benefits the majority party. In addition, are they usually from the moderate side of the party that is closer to the position of the party leadership? Or, are they strong partisan extremists? What is the relationship between these two cases and the collective policy interests pursued by the party leadership?

Another research question of interest is the role of “moderate” members from the majority party in terms of controlling extreme party members on committees. The proposition in Chapter 3 predicts a quasi negative relationship between bias of the majority delegation and that of the minority delegation. It could be applicable to the relationship between extreme majority party members and moderate majority party members on the committee.

Once we can make a subjective judgment on who is extremist and who is moderate, we can empirically test this relationship.

Special Rules and Dimensionality

I have looked at the relationship between the use of restrictive special rules and the low dimensionality of final passage votes. However, the partisan manipulation theory that I proposed in Chapter 4 is about the *change* in dimensionality: the bill becomes more uni-dimensional by receiving restrictive special rules. Therefore, the theoretical claim and the empirical assessment are not identical.

A more direct test of my theoretical claim would be to observe the change in dimensionality throughout the amending process. It requires a collection of new data, which is a set of roll call votes for each individual bill. After identifying these votes, we can calculate (PRE2 - PRE1) for each vote. Then, a series of linear models can be fitted as:

$$(\text{PRE2} - \text{PRE1})_{i[j]} = \alpha_j + \beta_j \times \text{time}_{i[j]} + \epsilon_{i[j]},$$

where j indicates legislations and i indicates roll call votes. Note that each legislation (j) has its own linear model fitting only with its own roll call votes (i 's) for the legislation, and consequently acquires its own β_j . One β value is assigned to each legislation, and a negative value of β represents the decrease in dimensionality for that particular bill. A next step is to estimate the linear model with β as a dependent variable:

$$\beta_j = \mathbf{a} + \mathbf{b}_1 \times \text{restrictive rule}_j + \mathbf{b}_{-1} \times \text{controls}_j + \epsilon_j,$$

where a set of control variables from Chapter 3 would be a nice choice here as well. A theoretical interest is, then, whether or not the restrictive rule variable has a negative coefficient ($b_1 < 0$).

Another path to strengthen my theory on partisan manipulation of dimensionality is to make a clear and theoretical connection between each element of restrictive special rules and its impact on the dimensionality of the bill. Why and how does a particular restriction lead to the low level of dimensionality? This would be especially useful for recent Congresses because there has been a significant development in uses of creative special rules (such as self-executing rule, king-of-the-mountain rule, queen-of-the-hill rule, etc), and most of those special rules were created and developed for the partisan purpose of the majority party.

Although it is not directly associated with each of the three essays, the broad theme of the dissertation can be expanded a little more by examining the strategies of party leaders. What strategies do parties employ to pursue their collective partisan interests? In what ways do they prioritize their goals and how does this relate to an individual legislator's goals? What are the differences in developing these strategies between the majority and the minority parties? In addition, it would be best if we can also examine how these strategies systematically relate to the electoral fortunes of both the majority and the minority parties over time.

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